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#### Remarks:

The complete document including Reference Tables and the Sequence Listing is available on CD-ROM from the European Patent Office, Vienne sub-office

#### (54) Full-length cDNAs

(57) Full-length cDNAs are provided.

1639 cDNA derived from human have been isolated. The full-length nucleotide sequences of the cDNA and amino acid sequences encoded by the nucleotide sequences have been determined. Because the cDNA

of the present invention are full-length and contain the translation start site, they provide information useful for analyzing the functions of the polypeptide.

#### Description

#### FIELD OF THE INVENTION

[0001] The present invention relates to polynucleotides encoding novel polypeptides, polypeptides encoded by the polynucleotides, and new uses of these.

#### BACKGROUND OF THE INVENTION

[0002] Currently, the sequencing projects, the determination and analysis of the genomic DNA of various living organisms have been in progress all over the world. The whole genomic sequences of more than 40 species of prokaryotes, a lower eukaryote, yeast, a multicellular eukaryote, *C. elegans*, and a higher plants, *arabidopsis*, etc. are already determined. For human genome, presumably having 3 billion base pairs, the analysis was advanced under global cooperative organization, and a draft sequence was disclosed in 2001. Moreover, all the structures are to be clear and to be disclosed in 2002 - 2003. The aim of the determination of genomic sequence is to reveal the functions of all genes and their regulation and to understand living organisms as a network of interactions between genes, proteins, cells or individuals through deducing the information in a genome, which is a blueprint of the highly complicated living organisms. To understand living organisms by utilizing the genomic information from various species is not only important as an academic subject, but also socially significant from the viewpoint of industrial application.

[0003] However, determination of genomic sequences itself cannot identify the functions of all genes. For example, as for yeast, only the function of approximately half of the 6000 genes, which is predicted based on the genomic sequence, was able to be deduced. On the other hand, the human genome has been estimated to contain about 30,000-40,000 genes. Further, 100,000 or more types of mRNAs are said to exist when variants produced by alternative splicing are taken into consideration. Therefore, it is desirable to establish "a high throughput analysis system of the gene functions" which allows us to identify rapidly and efficiently the functions of vast amounts of the genes obtained by the genomic sequencing.

[0004] Many genes in the eukaryotic genome are split by introns into multiple exons. Thus, it is difficult to predict correctly the structure of encoded protein solely based on genomic information. In contrast, cDNA, which is produced from mRNA that lacks introns, encodes a protein as a single continuous amino acid sequence and allows us to identify the primary structure of the protein easily. In human cDNA research, to date, more than three million ESTs (Expression Sequence Tags) are publicly available, and the ESTs presumably cover not less than 80% of all human genes.

[0005] The information of ESTs is utilized for analyzing the structure of human genome, or for predicting the exonregions of genomic sequences or their expression profile. However, many human ESTs have been derived from proximal regions to the 3'-end of cDNA, and information around the 5'-end of mRNA is extremely little. Among human cDNAs, the number of the corresponding mRNAs whose encoding full-length protein sequences are deduced is approximately 13,000.

[0006] It is possible to identify the transcription start site of mRNA on the genomic sequence based on the 5'-end sequence of a full-length cDNA, and to analyze factors involved in the stability of mRNA that is contained in the cDNA, or in its regulation of expression at the translation stage. Also, since a full-length cDNA contains atg codon, the translation start site, in the 5'-region, it can be translated into a protein in a correct frame. Therefore, it is possible to produce a large amount of the protein encoded by the cDNA or to analyze biological activity of the expressed protein by utilizing an appropriate expression system. Thus, analysis of a full-length cDNA provides valuable information which complements the information from genome sequencing. Also, full-length cDNA clones that can be expressed are extremely valuable in empirical analysis of gene function and in industrial application.

[0007] Therefore, if a novel human full-length cDNA is isolated, it can be used for developing medicines for diseases in which the gene is involved. The protein encoded by the gene can be used as a drug by itself. Thus, it has great significance to obtain a full-length cDNA encoding a novel human protein.

[0008] In particular, human secretory proteins or membrane proteins would be useful by itself as a medicine like tissue plasminogen activator (TPA), or as a target of medicines like membrane receptors. In addition, genes for signal transduction-related proteins (protein kinases, etc.), glycoprotein-related proteins, transcription-related proteins, etc. are genes whose relationships to human diseases have been elucidated. Moreover, genes for disease-related proteins form a gene group rich in genes whose relationships to human diseases have been elucidated.

[0009] Therefore, it has great significance to isolate novel full-length cDNA clones of human, only few of which has been isolated. Especially, isolation of a novel cDNA clone encoding a secretory protein or membrane protein is desired since the protein itself would be useful as a medicine, and also the clones potentially include a gene involved in diseases. In addition, genes encoding proteins that are involved in signal transduction, glycoprotein, transcription, or diseases are expected to be useful as target molecules for therapy, or as medicines themselves. These genes form a gene group predicted to be strongly involved in diseases. Thus, identification of the full-length cDNA clones encoding those

proteins has great significance.

#### SUMMARY OF THE INVENTION

<sup>5</sup> [0010] An objective of the present invention is to provide polynucleotides encoding novel polypeptides, polypeptides encoded by the polynucleotides, and novel usages of these.

[0011] The inventors have developed a method for efficiently cloning, from a cDNA library having very high fullness-ratio, a human full-length cDNA that is predicted to be a full-length cDNA clone, where the cDNA library is synthesized by an improved method (WO 01/04286) of the oligo-capping method (K. Maruyama and S. Sugano, Gene, 138: 171-174 (1994); Y. Suzuki et al., Gene, 200: 149-156 (1997)). Then, the nucleotide sequences of cDNA clones whose fullness ratio is high, obtained by this method, were determined mainly from their 5'-ends, and, if required, from 3'-ends.

[0012] Further, representative clones, which were estimated to be novel and full-length, among the clones obtained, were analyzed for their full-length nucleotide sequences. The determined full-length nucleotide sequences were analyzed by BLAST homology search of the databases shown below. Because the homology search of the present invention is carried out based on the information of full-length cDNAs including the entire coding regions, homology to every part of a polypeptide can be analyzed. Thus, in the present invention, the reliability of homology search has been greatly improved.

[1] SwissProt

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- (http://www.ebi.ac.uk/ebi\_docsSwissProt\_db/swisshome.html),
- [2] GenBank (http://www.ncbi.nlm.nih.gov/web/GenBank),
- [3] UniGene (Human) (http://www.ncbi.nlm.nih.gov/UniGene), and

[4] nr (a protein database, which has been constructed by combining data of coding sequences (CDS) in nucleotide sequences deposited in GenBank, and data of SwissProt, PDB (http://www.rcsb.org/pdb/index.html), PIR (http://pir.georgetown.edu/pirwww/pirhome.shtml), and PRF (http://www.prf.or.jp/en/); overlapping sequences have been-removed.)

[0013] Further, the gene expression profiles of cDNA clones whose full-length nucleotide sequence had been determined were studied by analyzing the large-scale cDNA database constructed based on the 5'-end nucleotide sequences of cDNAs obtained. In addition to the analysis for the expression profile by computer, the profiles of gene expression in living cells were also determined by PCR. The present inventors revealed the usefulness of the genes of the present invention based on these analysis results.

[0014] In the present invention, gene functions were revealed by the analysis of expression profiles *in silico* based on the information of full-length nucleotide sequences. The expression profiles used in the expression frequency analysis were studied based on the database containing sufficient amount of fragment sequence data. The expression frequency analysis was carried out by referring, for these expression profiles, to the full-length nucleotide sequences of many cDNA clones obtained in the present invention. Thus, a highly reliable analysis can be achieved by referring to the full-length nucleotide sequences of a wide variety of genes for the sufficiently large population for analysis (expression profiles). Namely, the results of expression frequency analysis using the full-length sequences of the present invention more precisely reflect the gene expression frequency in tissues and cells from which a certain cDNA library was derived. In other words, the information of full-length cDNA nucleotide sequence of the present invention made it possible to achieve the highly reliable expression frequency analysis.

[0015] The full-length cDNA clones of this invention were obtained by the method comprising the steps of [1] preparing libraries containing cDNAs with the high fullness ratio by oligo-capping, and [2] assembling 5'-end sequences and selecting one with the highest probability of completeness in length in the cluster formed (there are many clones longer in the 5'-end direction). However, the uses of primers designed based on the 5'- and 3'-end sequences of polynucleotides provided by the present invention enable readily obtaining full-length cDNAs without such a special technique. The primer, which is designed to be used for obtaining cDNAs capable of being expressed, is not limited to the 5'- end 3'-end sequences of polynucleotide.

[0016] Specifically, the present invention relates to a polynucleotide selected from the group consisting, of the following (a) to (g):

- (a) a polynucleotide comprising a protein-coding region of the nucleotide sequence of any one of SEQ ID NOs shown in Table 1;
- (b) a polynucleotide encoding a polypeptide comprising the amino acid sequence of any one of SEQ ID NOs shown in Table 1;
- (c) a polynucleotide comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of any one of SEQ ID NOs shown in Table 1, wherein, in said amino acid sequence, one or more amino

acids have been substituted, deleted, inserted, and/or added, and wherein said nucleotide sequence encodes a polypeptide functionally equivalent to a polypeptide comprising the selected amino acid sequence;

- (d) a polynucleotide hybridizing under stringent conditions to a polynucleotide comprising the nucleotide sequence of any one of SEQ ID NOs shown in Table 1, wherein said nucleotide sequence encodes a polypeptide functionally equivalent to a polypeptide encoded by the selected nucleotide sequence;
- (e) a polynucleotide comprising a nucleotide sequence encoding a partial amino acid sequence of a polypeptide encoded by the polynucleotide according to any one of (a) to (d);
- (f) a polynucleotide comprising a nucleotide sequence having at least 70% identity to the nucleotide sequence of (a): and
- (g) a polynucleotide comprising a nucleotide sequence having at least 90% identity to the nucleotide sequence of (a).

[0017] The present invention also relates to a polypeptide encoded by the above-mentioned polynucleotide or a partial peptide thereof, an antibody binding to the polypeptide or the peptide, and a method for immunologically assaying the polypeptide or the peptide, which comprises the steps of contacting the polypeptide or the peptide with the antibody, and observing the binding between the two.

**[0018]** Furthermore, the present invention features a vector comprising the above-mentioned polynucleotide, a transformant carrying the polynucleotide or the vector, a transformant carrying the polynucleotide or the vector in an expressible manner, and a method for producing the polypeptide or the peptide, which comprises the steps of culturing the transformant and recovering an expression product.

[0019] Another feature of the present invention is an oligonucleotide comprising at least 15 nucleotides, said oligonucleotide comprising a nucleotide sequence complementary to the nucleotide sequence of any one of SEQ ID NOs: 1 to 1639 or to a complementary strand thereof. This oligonucleotide can be used as a primer for synthesizing the above-mentioned polynucleotide or used as a probe for detecting the polynucleotide. The present invention includes an antisense polynucleotide against the polynucleotide or a part thereof, and a method for detecting the polynucleotide, which comprises the following steps of:

- a) incubating a target polynucleotide with the oligonucleotide under hybridizable conditions, and
- b) detecting hybridization of the target polynucleotide with the oligonucleotide.

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[0020] Still another feature of the present invention is a database of polynucleotides and/or polypeptides, said database comprising information on at least one of the nucleotide sequences of SEQ ID NOs: 1 to 1639 and/or on at least one of the amino acid sequences of SEQ ID NOs: 1640 to 3278.

[0021] Herein, "polynucleotide" is defined as a molecule, such as DNA and RNA, in which multiple nucleotides are polymerized. There are no limitations on the number of the polymerized nucleotides. In case that the polymer contains relatively low number of nucleotides, it is also described as an "oligonucleotide", which is included in the "polynucleotide" of the present invention. The polynucleotide or the oligonucleotide of the present invention can be a natural or chemically synthesized product. Alternatively, it can be synthesized using a template polynucleotide by an enzymatic reaction such as PCR. Furthermore, the polynucleotide of the present invention may be modified chemically. Moreover, not only a single-strand polynucleotide but also a double-strand polynucleotide is included in the present invention. In this specification, especially in claims, when the polynucleotide is described merely as "polynucleotide", it means not only a single-strand polynucleotide but also a double-strand polynucleotide. When it means double-strand polynucleotide, the nucleotide sequence of only one chain is indicated. However, based on the nucleotide sequence of a sense chain, the nucleotide sequence of the complementary strand thereof is essentially determined.

[0022] As used herein, an "isolated polynucleotide" is a polynucleotide the structure of which is not identical to that of any naturally occurring polynucleotide or to that of any fragment of a naturally occurring genomic polynucleotide spanning more than three separate genes. The term therefore includes, for example, (a) a DNA which has the sequence of part of a naturally occurring genomic DNA molecule in the genome of the organism in which it naturally occurs; (b) a polynucleotide incorporated into a vector or into the genomic DNA of a prokaryote or eukaryote in a manner such that the resulting molecule is not identical to any naturally occurring vector or genomic DNA; (c) a separate molecule such as a cDNA, a genomic fragment, a fragment produced by polymerase chain reaction (PCR), or a restriction fragment; and (d) a recombinant nucleotide sequence that is part of a hybrid gene, i.e., a gene encoding a fusion polypeptide. Specifically excluded from this definition are polynucleotides of DNA molecules present in mixtures of different (i) DNA molecules, (ii) transfected cells, or (iii) cell clones; e.g., as these occur in a DNA library such as a cDNA or genomic DNA library.

[0023] The term "substantially pure" as used'herein in reference to a given protein or polypeptide means that the protein or polypeptide is substantially free from other biological macromolecules. For example, the substantially pure protein or polypeptide is at least 75%, 80%, 85%, 95%, or 99% pure by dry weight. Purity can be measured by any

appropriate standard method known in the art, for example, by column chromatography, polyacrylamide gel electrophoresis, or HPLC analysis.

[0024] All the cDNAs provided by the present invention are full-length cDNAs. The "full-length cDNA" herein means that the cDNA contains the ATG codon, which is the start point of translation therein. The untranslated regions upstream and downstream of the protein-coding region, both of which are naturally contained in natural mRNAs, are not indispensable. It is preferable that the full-length cDNAs of the present invention contain the stop codon.

#### BRIEF DESCRIPTION OF THE DRAWINGS

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[0025] Figure 1 shows the restriction map of the vector pME18SFL3.

#### DETAILED DESCRIPTION OF THE INVENTION

[0026] All the clones (1639 clones) of the present invention are novel and encode the full-length polypeptides. Further, all the clones are cDNAs with the high fullness ratio, which were obtained by oligo-capping method, and also clones which are not identical to any of known human mRNAs (namely, novel clones) selected by searching, for the 5'-end sequences, mRNA sequences with the annotation of "complete cds" in the GenBank and UniGene databases by using the BLAST homology search [S. F. Altschul, W. Gish, W. Miller, E. W. Myers & D. J. Lipman, J. Mol. Biol., 215: 403-410 (1990); W. Gish & D. J. States, Nature Genet., 3: 266-272 (1993)]; they are also clones that were assumed to have higher fullness ratio among the members in the cluster formed by assembling. Most of the clones assessed to have high fullness ratio in the cluster had the nucleotide sequences longer in the 5'-end direction.

[0027] All the full-length cDNAs of the present invention can be synthesized by a method such as PCR (Current protocols in Molecular Biology edit. Ausubel et al. (1987) Publish. John Wiley & Sons Section 6.1-6.4) using primer sets designed based on the 5'-end and 3'-end sequences or using primer sets of primers designed based on the 5'-end sequences and a primer of oligo dT sequence corresponding to poly A sequence. Table 1 contains the clone names of full-length cDNA of 1639 clones of the present invention, SEQ ID NOs of the full-length nucleotide sequences, CDS portions deduced from the full-length nucleotide sequences, and SEQ ID NOs of the translated amino acids. The positions of CDS are shown according to the rule of "DDBJ/EMBL/GenBank Feature Table Definition" (http://www.ncbi.nlm.nih.gov/collab/FT/index.html). The start position number corresponds to the first letter of "ATG" that is the nucleotide triplet encoding methionine; the termination position number corresponds to the third letter of the stop codon. These are indicated being flanked with the mark "..". However, with respect to the clones having no stop codon, the termination position is indicated by the mark ">-" according to the above rule.

Table 1

35	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
	3NB6910000180	1	5051434	1640
	3NB6910000850	2	132836	1641
40	3NB6910001160	3	85702	1642
	3NB6910001290	4	194706	1643
	3NB6910001730	5	166>1755	1644
	3NB6920000290	6	9911335	1645
	3NB6920002810	7	81375	1646
45	3NB6920003300	8	128901	1647
	3NB6920005450	9	21809	1648
	3NB6920009120	10	2471983	1649
	3NB6920010020	11	59913	1650
50	3NB6920010220	12	1081289	1651
	3NB6920013490	13	4021214	1652
	3NB6920014330	14	6741516	1653
	3NB6920014710	15	369>1990	1654
	3NB6920015110	16	3061163	1655
55	3NB6920015280	17	1621847	1656
	3NB6920015570	18	4071903	1657
	3NB6920016370	19	25348	1658

Table 1 (continued)

3   3   3   3   3   3   3   3   3   3		Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid sequence
ADRGL10000020 21 7,1773 1660 ADRGL10000180 22 1742.2110 1661 ADRGL100001600 23 425.1072 1662 ADRGL10001600 24 101407 1663 ADRGL10001600 25 107.1387 1664 ADRGL10001820 26 21652467 1665 ADRGL20000740 27 1141349 1666 ADRGL200003230 28 118516 1667 ADRGL200003230 28 118516 1666 ADRGL200003230 28 118516 1666 ADRGL20000320 29 169477 1668 ASTR01000180 30 1582716 1669 ASTR020000480 31 1101315 1670 ASTR020004170 32 11211732 1671 ASTR020004170 32 11211732 1671 ASTR020004170 32 11211732 1671 BGG112000530 33 1771539 1672 BGG112000540 33 1771539 1672 BGG112000540 37 4531661 1676 BGG112000540 38 1401303 1677 BGG1120006930 BGG1120006930 BGG112000970 BGG112001714 41 140.1009 1680 BGG112001714 41 140.1009 1680 BGGH1000030 42 7801667 1681 BGGH1000030 42 7801667 1681 BNGH410000130 43 10871539 1682 BNGH410000130 44 16661801 1683 BNGH410000170 44 16661801 1683 BNGH41000030 48 1341135 1687 BNGH41000030 49 225549 1688 BNGH41000030 49 225549 1688 BNGH41000030 51 1687 BNGH41000030 51 1687 BNGH41000030 51 1688 BNGH410000170 54 1688 BNGH41000030 51 1689 BNGH41000030 51 1689 BNGH41000030 51 1689 BNGH41000030 51 1689 BNGH41000030 52 611740 1691 BNGH410000170 54 1682624 1690 BNGH410000170 59 BNGH41000180 51 1688 BNGH410000170 59 BNGH41000180 59 BNGH410000180 59 BNGH41000018		31,56030017100	sequence	-151-1066	1. ·
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BGGI110002850   34					
BGGI120001610   35	20				
BGGI120005330   36   79.1548   1675     BGGI120005440   37   453.1661   1676     BGGI120006840   38   140.1303   1677     BGGI120006930   39   38.1627   1678     BGGI120010970   40   264.2078   1679     BGGI120017140   41   140.1009   1680     BNGH41000030   42   780.1967   1681     30   BNGH410000170   44   1666.1801   1683     BNGH410000290   45   51.1661   1684     BNGH41000030   46   2453.2782   1685     BNGH41000030   48   134.1135   1687     BNGH41000030   48   134.1135   1687     BNGH41000030   48   134.1135   1687     BNGH41000030   48   134.1135   1687     BNGH41000180   49   232.549   1688     BNGH41000180   50   146.1651   1689     BNGH41000180   51   166.2624   1690     BNGH41000170   52   61.1740   1691     BNGH41000170   54   82.1773   1693     BNGH41000170   55   113.2458   1694     BNGH41000190   55   113.2458   1694     BNGH42000520   58   354.1937   1697     BRACE10000420   60   214.1332   1699     BRACE10000730   62   168.698   1701     BRACE10000730   62   168.698   1701     BRACE10000150   64   76.624   1703     BRACE1000150   65   225.767   1704     BRACE1000150   67   557.889   1706     BRACE1000160   67   557.889   1706				1	
BGGI120005440   37					
25         BGGI120006840         38         140.1303         1677           BGGI120006930         39         38.1627         1678           BGGI120010970         40         264.2078         1679           BGGI120017140         41         140.1009         1680           BNGH410000130         42         780.1967         1681           30         BNGH410000170         44         1466.1801         1683           BNGH410000330         46         2453.2782         1685           BNGH410000330         46         2453.2782         1685           BNGH410000340         47         539.1477         1686           BNGH410000390         48         134.1135         1687           BNGH410000800         49         232.549         1688           BNGH410001180         51         166.>2624         1690           BNGH410001180         51         166.>2624         1690           BNGH41000170         54         821773         1693           BNGH41000170         54         821773         1693           BNGH410001900         55         113>2458         1694           BNGH410001900         55         113>2458         1694					1
BGGI120006930 BGGI120010970 BGGI120017140 BGGI120017140 BNGH41000030 BNGH410000130 BNGH410000170 BNGH41000030 BNGH41000100 BNGH41000100 BNGH41000100 BNGH41000170 BNGH41000170 BNGH41000170 BNGH41000170 BNGH41000170 BNGH41000170 BNGH41000170 BNGH41000170 BNGH41000190					
BGGI120010970         40         2642078         1679           BGGI120017140         41         1401009         1680           BNGH410000030         42         7801967         1681           BNGH410000170         44         14661801         1682           BNGH410000300         45         511661         1683           BNGH410000330         46         24532782         1685           BNGH410000340         47         5391477         1686           BNGH410000390         48         1341135         1687           BNGH410000800         49         232549         1688           BNGH410001140         50         1461651         1689           BNGH410001370         52         611740         1691           BNGH410001770         54         821773         1693           BNGH410001900         55         113>2458         1694           BNGH420004740         57         11711473         1696           BNGH20005320         58         3541937         1697           BRACE10000420         60         2141332         1699           BRACE10000700         61         181.900         1700           BRA	25				
BGGI120017140					i
BNGH41000030					1
30         BNGH410000130 BNGH410000290         43         10871539         1682 BNGH410000290           BNGH410000290         45         511661         1684 BNGH410000330         46         24532782         1685 BNGH410000390         47         5391477         1686 BNGH410000390         48         1341135         1687 BNGH410001040         49         232549         1688 BNGH410001180         50         1461651         1689 BNGH410001180         51         166>2624         1690 BNGH410001530         53         13681760         1691 BNGH410001770         54         821773         1693 BNGH410001900         55         113>2458         1694 BNGH420004740         57         11711473         1696 BNGH420005320         58         3541937         1697 BRACE10000200         59         9591267         1698 BRACE10000420         60         2141332         1699 BRACE10000730         62         168.698         1701 BRACE10000150         64         76624         1703 BRACE1000150         65         225767         1704 BRACE1000160         66         7771325         1705 BRACE1000160         67         557889         1706					
BNGH410000170	30				
BNGH410000290 45 511661 1684 BNGH410000330 46 24532782 1685 BNGH410000340 47 5391477 1686 BNGH410000390 48 1341135 1687 BNGH410000800 49 232549 1688 BNGH410001040 50 1461651 1689 BNGH410001180 51 166>2624 1690 BNGH410001770 52 611740 1691 BNGH410001770 54 821773 1693 BNGH410001900 55 113>2458 1694 BNGH410001900 55 113>2458 1694 BNGH410001900 56 971476 1695 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699  50 BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE10001590 65 225767 1704 BRACE10001590 65 225767 1704 BRACE10001600 66 7771325 1705 BRACE10001600 67 557889 1706	"			Α	I
BNGH410000330					
BNGH410000340					
BNGH410000390					·
BNGH410000800	35				· •
BNGH410001040 50 1461651 1689 BNGH410001180 51 166>2624 1690 BNGH410001370 52 611740 1691 BNGH410001530 53 13681760 1692 BNGH410001900 55 113>2458 1694 BNGH410001900 55 113>2458 1694 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699 BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE1000150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001690 67 557889 1706					
BNGH410001180 51 166>2624 1690 BNGH410001370 52 611740 1691 BNGH410001530 53 13681760 1692 BNGH410001770 54 821773 1693 BNGH410001900 55 113>2458 1694 BNGH410001980 56 971476 1695 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699 BRACE10000730 61 181900 1700 BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE10001590 65 225767 1704 BRACE10001690 67 557889 1706					
40       BNGH410001370       52       611740       1691         BNGH410001530       53       13681760       1692         BNGH410001770       54       821773       1693         BNGH410001900       55       113>2458       1694         BNGH410001980       56       971476       1695         BNGH420004740       57       11711473       1696         BNGH420005320       58       3541937       1697         BRACE10000200       59       9591267       1698         BRACE10000420       60       2141332       1699         50       BRACE10000700       61       181900       1700         BRACE10000730       62       168698       1701         BRACE1000150       64       76624       1703         BRACE10001590       65       225767       1704         BRACE10001600       66       7771325       1705         BRACE10001690       67       557889       1706					
BNGH410001530 53 13681760 1692 BNGH410001770 54 821773 1693 BNGH410001900 55 113>2458 1694 BNGH410001980 56 971476 1695 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699 BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE10000150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001600 66 7771325 1705 BRACE10001690 67 557889 1706	40				
BNGH410001770 54 821773 1693 BNGH410001900 55 113>2458 1694 BNGH410001980 56 971476 1695 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699 BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE1000150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001690 66 7771325 1705 BRACE10001690 67 557889 1706					
BNGH410001900 55 113>2458 1694 BNGH410001980 56 971476 1695 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699 BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001690 67 557889 1706				i	
BNGH410001980 56 971476 1695 BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699  BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE1000150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001600 66 7771325 1705 BRACE10001690 67 557889 1706					
BNGH420004740 57 11711473 1696 BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699  BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE1000930 63 451388 1702 BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001600 66 7771325 1705 BRACE10001690 67 557889 1706					
BNGH420005320 58 3541937 1697 BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699  50 BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001600 66 7771325 1705 BRACE10001690 67 557889 1706	45				
BRACE10000200 59 9591267 1698 BRACE10000420 60 2141332 1699  50 BRACE10000700 61 181900 1700 BRACE10000730 62 168698 1701 BRACE1000930 63 451388 1702 BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001600 66 7771325 1705 BRACE10001690 67 557889 1706					1
BRACE10000420 60 2141332 1699  BRACE10000700 61 181900 1700  BRACE10000730 62 168698 1701  BRACE10000930 63 451388 1702  BRACE10001150 64 76624 1703  BRACE10001590 65 225767 1704  BRACE10001660 66 7771325 1705  BRACE10001690 67 557889 1706					1
50         BRACE10000700 BRACE10000730         61         181900 1700 1700 1700 1700 1700 1700 1700 1		BRACE10000420			1
BRACE10000730 62 168698 1701 BRACE10000930 63 451388 1702 BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001660 66 7771325 1705 BRACE10001690 67 557889 1706	50	BRACE10000700			1
BRACE10000930 63 451388 1702 BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001660 66 7771325 1705 BRACE10001690 67 557889 1706		BRACE10000730	62	168698	
BRACE10001150 64 76624 1703 BRACE10001590 65 225767 1704 BRACE10001660 66 7771325 1705 BRACE10001690 67 557889 1706					1
BRACE10001590 65 225767 1704 BRACE10001660 66 7771325 1705 BRACE10001690 67 557889 1706					1
BRACE10001660     66     7771325     1705       BRACE10001690     67     557889     1706		1	1		l l
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		BRACE10001870	68	851704	

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	- Crond name	sequence		sequence
5	BRACE20000770	69	162605	1708
Ū	BRACE20001000	70	11221430	1709
	BRACE20001410	71	229975	1710
	BRACE20002800	72	351663	1711
	BRACE20003320	73	4712063	1712
10	BRACE20004210	74	15622716	1713
	BRACE20005050	75	7111013	1714
	BRACE20005250	76	6171144	1715
	BRACE20005450	77	184498	1716
15	BRACE20005650	78	272841	1717
	BRACE20005770	79	514816	1718
	BRACE20006980	80	851446	1719
	BRACE20007180	81	12631679	1720
	BRACE20008850	82	596>1809	1721
20	BRACE20009880	83	17612069	1722
	BRACE20010650	84	12571922	1723
	BRACE20010700	85	1680 >1989	1724
	BRACE20011170	86	87 410	1725
25	BRACE20011430	87	15502041	1726
	BRACE20011880	88	7421104	1727
	BRACE20013400	89	14951890	1728
	BRACE20013520	90	6771048	1729
	BRACE20013740	91	16942317	1730
30	BRACE20013750	92	8211192	1731
	BRACE20014230	93	15231978	1732
	BRACE20014530	94	17472205	1733
	BRACE20014550	95	9211838	1734
35	BRACE20014770	96	3511286	1735
	BRACE20014920	97	13061638	1736
	BRACE20015080	- 98	39545	1737
	BRACE20015430	99	235579	1738
40	BRACE20016730	100	445828	1739
40	BRACE20016920	101	96569	1740
	BRACE20017370	102	16122082	1741
	BRACE20018550	103	1522008	1742
	BRACE20018590 BRACE20018650	104 105	9021408 11431529	1743 1744
45	BRACE20018980	106	21782558	1745
	BRACE20019440	107	2251205	1746
	BRACE20020500	108	6051372	1747
	BRAGE20020910	109	2831176	1748
50	BRACE20021510	110	10031653	1749
30	BRACE20021760	111	3931148	1750
	BRACE20021700	112	7171727	1751
	BRACE20022270	113	3353	1752
	BRACE20024090	114	165845	1753
55	BRACE20024310	115	22922618	1754
	BRACE20024680	116	651129	1755
	BRACE20024780	117	2971154	1756
Į	<u>_</u>			

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
5	BRACE20024950	118	49369	1757
J	BRACE20025900	119	636 941	1758
	BRACE20026350	120	106753	1759
	BRACE20026850	121	1131063	1760
	BRACE20027360	122	11471680	1761
10	BRACE20027520	123	6131215	1762
	BRACE20027550	124	168578	1763
	BRACE20027720	125	169777	1764
	BRACE20027920	126	1051496	1765
15	BRACE20027960	127	17312132	1766
, ,	BRACE20028120	128	408917	1767
	BRACE20028600	129	7841593	1768
	BRACE20028610	130	7741196	1769
	BRACE20028960	131	631472	1770
20	BRACE20030780	132	236637	1771
	BRACE20031100	133	2142565	1772
	BRACE20032850	134	6981327	1773
	BRACE20033190	135	202531	1774
25	BRACE20033980	136	8111215	1775
-	BRACE20034310	137	5261461	1776
	BRACE20034490	138	13161699	1777
	BRACE20035160	139	492896	1778
	BRACE20035270	140	5721099	1779
30	BRACE20035390	141	8911211	1780
	BRACE20035940	142	80601	1781
	BRACE20071380	143	1901335	1782
	BRACE20071530	144	62604	1783
35	BRACE20071740	145	1181800	1784
	BRACE20071970	146	15841895	1785
	BRACE20072010	147	4221114	1786
-	BRACE20072320	148	266583	1787
	BRACE20072810	149	8581193	1788
40	BRACE20074010	150	921246	1789
	BRACE20074470	151	7422109	1790
	BRACE20075020	152	22482553	1791
	BRACE20075270	153	17402285	1792
45	BRACE20075380	154	14551889	1793
	BRACE20075630	155	9961445	1794
	BRACE20076210	156	8501509	1795
	BRACE20076410	157	781040	1796
	BRACE20076460	158	13681709	1797
50	BRACE20076630	159	634996 598984	1798
	BRACE20076850	160		1799
	BRACE20077080	161 162	119853	1800
	BRACE20077270 BRACE20077610	162 163	95445 239553	1801 1802
55	BRACE20077610	164	595900	1803
	BRACE20077670	165	317649	1804
	BRACE20077670 BRACE20077680	166	20132390	1805
Į	5.0.0020077000	100	20102000	1000

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
	BRACE20077840	167	  -   18524	1806
5	BRACE20077980	168	8551604	1807
	BRACE20078680	169	1144>1753	1808
	BRACE20078820	170	2580	1809
	BRACE20079020	171	11781681	1810
10	BRACE20079530	172	8331	1811
	BRACE20080970	173	10251348	1812
	BRACE20081140	174	14463	1813
	BRACE20083800	175	711201	1814
	BRACE20083850	176	1831046	1815
15	BRACE20084430	177	10351649	1816
	BRACE20084800	178	57845	1817
	BRACE20084880	179	12341617	1818
	BRACE20086530	180	405914	1819
20	BRACE20086550	181	219632	1820
	BRACE20087080	182	31342	1821
	BRACE20087540	183	10131459	1822
	BRACE20088570	184	42365	1823
	BRACE20089600	185	121630	1824
25	BRACE20089990	186	446928	1825
	BRACE20090140	187	677979	1826
	BRACE20091880	188	18539	1827
	BRACE20092120	189	1601959	1828
30	BRACE20092740	190	255905	1829
	BRACE20092750	191	14501827	1830
	BRACE20093070	192	5621158	1831
	BRACE20093110	193	15811940	1832
35	BRACE20093610	194	1337>1783	1833
33	BRACE20094370	195	8261149	1834
	BRACE20095170	196	16571959	1835
	BRAWH10000010	197	12412050	1836
	BRAWH10000020	198	869>1920	1837
40	BRAWH10000070	199	5602242	1838
	BRAWH10000370	200	161787	1839
	BRAWH10000940	201	2032020	1840
	BRAWH10001300	202	2562025	1841
45	BRAWH10001620	203	1091128	1842
75	BRAWH10001640	204	185613	1843
	BRAWH10001680	205	229987	1844
	BRAWH10001740	206	2771383	1845
	BRAWH10001800	207	182601	1846
50	BRAWH20000340	208	22142537	1847
	BRAWH20000480	209	2181117	1848
	BRAWH20000930	210	15211904	1849
	BRAWH20001090	211	3562014	1850
55	BRAWH20001770	212	69476	1851
	BRAWH20002480	213	13851777	1852
	BRAWH20003230	214	232780	1853
	BRAWH20004430	215	2222186	1854

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	BRAWH20004760	216	22564	1855
	BRAWH20005030	217	14311754	1856
	BRAWH20005220	218	98700	1857
	BRAWH20005540	219	416811	1858
	BRAWH20006330	220	8541741	1859
10	BRAWH20006510	221	4381163	1860
	BRAWH20006860	222	5992179	1861
	BRAWH20006970	223	11781579	1862
	BRAWH20008660	224	505924	1863
15	BRAWH20008920	225	21792529	1864
,,	BRAWH20009010	226	11391540	1865
	BRAWH20009440	227	4221603	1866
	BRAWH20009840	228	8261764	1867
	BRAWH20011030	229	18812186	1868
20	BRAWH20011290	230	711444	1869
	BRAWH20011410	231	251718	1870
	BRAWH20011660	232	1041411	1871
	BRAWH20012030	233	55684	1872
25	BRAWH20014180	234	5751	1873
	BRAWH20014380	235	7951130	1874
	BRAWH20014610	236	7431216	1875
	BRAWH20014840	237	4042227	1876
	BRAWH20015030	238	8611232	1877
30	BRAWH20036890	239	319864	1878
	BRAWH20036930	240	283078	1879
	BRAWH20038320	241	9981306	1880
	BRAWH20040950	242	18672205	1881
35	BRAWH20047310	243	47547	1882
	BRAWH20052250	244	30398	1883
	BRAWH20059980	245	1611900	1884
	BRAWH20060440	246	652083	1885
	BRAWH20064500	247	2091675	1886,
40	BRAWH20064930	248	4031908	1887
	BRAWH20066220	249	1395>2080	1888
	BRAWH20069600	250	14821976	1889
	BRAWH20069890	251	4441226	1890
45	BRAWH20074060	252	10281429	1891
	BRAWH20076050	253	451469	1892
	BRAWH20087060	254	11602053	1893
	BRAWH20089030	255	346825	1894
	BRAWH20089560	256	872906	1895
50	BRAWH20092270	257	2231062	1896
	BRAWH20092610	258	258791	1897
	BRAWH20093600	259	21644	1898
	BRAWH20094850	260	12131536	1899
55	CD34C20000510	261	71380	1900
	CTONG20003030	262	22282641	1901
	CTONG20005890	263	2943017	1902
Į	CTONG20007710	264	10881468	1903

Table 1 (continued)

		Table I (c		
	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5 ·	CTONG20008270	265	8632080	1904
	CTONG20011390	266	503337	1905
	CTONG20013200	267	1231823 1823	1906
	CTONG20013660	268	31571	1907
	CTONG20015330	269	87527	1908
10	CTONG20018200	270	42>3217	1909
	CTONG20019110	271	5111455	1910
	CTONG20019550	272	162>3684	1911
	CTONG20020730	273	201342	1912
	CTONG20021430	274	74>2745	1913
15	CTONG20024180	275	6412452	1914
	CTONG20024180	276	618986	1915
	CTONG20024550	277	12812177	
		277		1916
20	CTONG20027210		366>2763	1917
	CTONG20028030	279	8371280	1918
	CTONG20028160	280	3012799	1919
	CTONG20028200	281	148>3543	1920
	CTONG20029650	282	118>2551	1921
25	CTONG20037820	283	332895	1922
	CTONG20047160	284	1131021	1923
	CTONG20055530	285	63>2305	1924
	CTONG20064490	286	15331859	1925
	D30ST20001840	287	771429	1926
30	DFNES20002120	288	12631940	1927
	DFNES20002680	289	5052571	1928
	DFNES20002920	290	52639	1929
	DFNES20003350	291	331007	1930
35	DFNES20004320	292	15171849	1931
	FCBBF10005980	293	3752141	1932
	FCBBF10006180	294	11611463	1933
	FCBBF10006750	295	1061023	1934
	FCBBF10006860	296	521865	1935
40	FCBBF10006870	297	4101831	1936
	FCBBF10006910	298	111482	1937
	FCBBF10007320	299	12361850	1938
	FCBBF10007600	300	68523	1939
45	FCBBF20000940	301	2492147	1940
,,	FCBBF20001050	302	29421	1941
	FCBBF20001950	303	15651888	1942
	FCBBF20002320	304	9212003	1943
	FCBBF20002760	305	221895	1944
50	FCBBF20005760	306	6931073	1945
	FCBBF20005910	307	29>2161	1946
	FCBBF20006770	308	265600	1947
	FCBBF20007330	309	7451077	1948
	FCBBF20008080	310	180821	1949
55	FCBBF20008150	311	6411762	1950
	FCBBF20009400	312	360749	1951
	FCBBF20009510	313	2181333	1952

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	Cione name	sequence		sequence
5	FCBBF20012110	314	1361776	1953
5	FCBBF20012990	315	7581168	1954
	FCBBF20014800	316	1461957	1955
	FCBBF20015380	317	3021246	1956
	FCBBF20016720	318	51488	1957
10	FCBBF20017180	319	236 598	1958
	FCBBF20017200	320	23062767	1959
	FCBBF40002820	321	2071247	1960
	FCBBF50002610	322	1261634	1961
15	FEBRA20000350	323	7241764	1962
15	FEBRA20000530	324	3592221	1963
	FEBRA20001050	325	4962355	1964
	FEBRA20001290	326	8721192	1965
	FEBRA20003110	327	386964	1966
20	FEBRA20003300	328	15041881	1967
	FEBRA20003770	329	3982464	1968
	FEBRA20003780	330	454873	1969
	FEBRA20003910	331	17282057	1970
25	FEBRA20003970	332	1621469	1971
23	FEBRA20003990	333	8452404	1972
	FEBRA20004040	334	21449	1973
	FEBRA20004150	335	8362494	1974
	FEBRA20004520	336	113442	1975
30	FEBRA20004540	337	9342484	1976
	FEBRA20004910	338	14171926	1977
	FEBRA20005360	339	2541453	1978
	FEBRA20006560	340	34615	1979
35	FEBRA20006800	341	3031040	1980
33	FEBRA20006900	342	12681669	1981
	FEBRA20007330	343	14862013	1982
	FEBRA20007400	344	321123	1983
	FEBRA20007570	345	2221193	1984
40	FEBRA20007710	346	10591361	1985
	FEBRA20007720	347	267689	1986
	FEBRA20007870	348	11741788	1987
	FEBRA20008090	349	13191621	1988
45	FEBRA20008560	350	15001991	1989
, ,	FEBRA20008740	351	20512368	1990
ĺ	FEBRA20008800	352	38703	1991
	FEBRA20008810	353	3771495	1992
	FEBRA20009010	354	243638	1993
50	FEBRA20009590	355	13451677	1994
	FEBRA20009720	356	5302140	1995
	FEBRA20010930	357	2391249	1996
	FEBRA20011330	358	17952322	1997
55	FEBRA20011460	359	22192602	1998
- 1	FEBRA20011970	360	16721977	1999
	FEBRA20012270	361	19332238	2000
Į	FEBRA20012450	362	5192678	2001

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence	 	sequence
5	FEBRA20012940	363	69575	2002
	FEBRA20013510	364	9901313	2003
	FEBRA20014870	365	15671884	2004
	FEBRA20014920	366	772815	2005
10	FEBRA20015840	367	7021853	2006
10	FEBRA20015900	368	15351882	2007
	FEBRA20015910	369	246617	2008
	FEBRA20017060	370	7301257	2009
	FEBRA20017150	371	3912799	2010
15	FEBRA20017900	372	72647	2011
	FEBRA20019890	373	4972239	2012
	FEBRA20020860	374	281673	2013
	FEBRA20021910	375	14551829	2014
	FEBRA20021940	376	17493	2015
20	FEBRA20024290	377	351933	2016
	FEBRA20024420	378	9911614	2017
	FEBRA20025250	379	2512164	2018
	FEBRA20027270	380	10930	2019
25	FEBRA20027830	381	293610	2020
	FEBRA20028820	382	13371678	2021
	FEBRA20028970	383	8241303	2022
	FEBRA20029080	384	90764	2023
	FEBRA20030540	385	292993	2024
30	FEBRA20031550	386	20002365	2025
	FEBRA20033080	387	399749	2026
	FEBRA20034290	388	348854	2027
	FEBRA20037070	389	1830>2246	2028
35	FEBRA20041100	390	1981010	2029
	FEBRA20041910	391	39425	2030
	FEBRA20042240	392	13731714	2031
	FEBRA20042370	393	51938	2032
	FEBRA20042930	394	2321>2652	2033
40	FEBRA20043250	395	394>2294	2034
	FEBRA20043290	396	572984	2035
	FEBRA20044120	397	9281263	2036
	FEBRA20044430	398	192539	2037
45	FEBRA20044900	399	781763	2038
.	FEBRA20045920	400	3441438	2039
	FEBRA20048180	401	86493	2040
	FEBRA20050140	402	7272325	2041
1	FEBRA20050790	403	7801295	2042
50	FEBRA20052160	404	10551411	2043
	FEBRA20053770	405	7901197	2044
ļ	FEBRA20053800	406	213521	2045
	FEBRA20054270	407	17112058	2046
55	FEBRA20057260	408	81789	2047
33	FEBRA20057520	409	13480	2048
1	FEBRA20057780	410	150641	2049
Į	FEBRA20057880	411	8>3165	2050

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
5	FEBRA20059980	412	11602017	2051
3	FEBRA20060920	413	26661	2052
	FEBRA20061500	414	77460	2053
	FEBRA20062700	415	32778	2054
	FEBRA20063150	416	236538	2055
10	FEBRA20063540	417	14021737	2056
	FEBRA20064760	418	3402076	2057
	FEBRA20066270	419	278691	2058
	FEBRA20066670	420	19332496	2059
15	FEBRA20067360	421	1601713	2060
	FEBRA20067930	422	13321973	2061
	FEBRA20068730	423	1712051	2062
	FEBRA20069420	424	2311439	2063
	FEBRA20070170	425	88921	2064
20	FEBRA20072000	426	472065	2065
	FEBRA20072800	427	18502335	2066
	FEBRA20074140	428	57371	2067
	FEBRA20074580	429	91420	2068
25	FEBRA20075510	430	181606	2069
	FEBRA20075660	431	19602298	2070
	FEBRA20076220	432	1472525	2071
	HCASM10000210	433	3841154	2072
	HCASM10000610	434	317871	2073
30	HCASM10001150	435	473868	2074
	HCASM20002020	436	152469	2075
	HCASM20002140	437	4081136	2076
	HCASM20003070	438	481865	2077
35	HCASM20005340	439	10031368	2078
	HCASM20005360	440	22112618	2079
	HEART20000350	441	5141290	2080
	HEART20000990	442	13411670	2081
	HEART20003090	443	11331657	2082
40	HEART20004110	444	391415	2083
	HEART20004480	445	8631171	2084
	HEART20004920	446	159851	2085
	HEART20005060	447	951495	2086
45	HEART20005200	448	9381375	2087
	HEART20005680	449	7831139	2088
	HHDPC20000550	450	551320	2089
	HHDPC20000950	451	3381462	2090
	HHDPC20001150 HHDPC20001490	452 453	326925	2091
50	HHDPC20001490 HHDPC20003150	453 454	3372265	2092
	HHDPC20003150	454 455	5061711	2093
	HHDPC20004560	456	1972065 174>2424	2094
	HHDPC20004580	456 457	174>2424	2095 2096
55	HLUNG10000240	457 458	1439 1762	2096
	HLUNG10000240	459	205555	2097
	HLUNG10000370	460	141930	2099
Į		700	171.1000	2033

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	HLUNG10000640	461	1441514	2100
_	HLUNG10000760	462	801246	2101
	HLUNG10000990	463	672370	2102
	HLUNG10001050	464	10811614	2103
	HLUNG10001100	465	302703	2104
10	HLUNG20000680	466	1871527	2105
	HLUNG20001160	467	3911434	2106
	HLUNG20001250	468	360899	2107
	HLUNG20001420	469	1731600	2108
15	HLUNG20001760	470	6524	2109
,5	HLUNG20002550	471	11011865	2110
	HLUNG20003140	472	36359	2111
	HLUNG20004120	473	416820	2112
	HLUNG20004800	474	14001711	2113
20	HLUNG20005010	475	37966	2114
	HSYRA10001190	476	1591712	2115
	HSYRA10001370	477	1941903	2116
	HSYRA10001480	478	27614	2117
25	HSYRA10001680	479	59>2245	2118
25	HSYRA10001780	480	5981023	2119
.	HSYRA20001350	481	2182371	2120
	HSYRA20002480	482	670972	2121
	HSYRA20002530	483	214780	2122
30	HSYRA20003470	484	11341580	2123
	HSYRA20005100	485	1381379	2124
	HSYRA20006050	486	661199	2125
	HSYRA20006290	487	2221160	2126
25	HSYRA20006400	488	6481052	2127
35	HSYRA20007600	489	3891207	2128
	HSYRA20008280	490	14921821	2129
	HSYRA20011030	491	572>2236	2130
	HSYRA20011530	492	653955	2131
40	HSYRA20013320	493	3956	2132
	HSYRA20014200	494	3261237	2133
	HSYRA20014760	495	46783	2134
	HSYRA20015740	496	117947	2135
45	HSYRA20015800	497	11001435	2136
45	HSYRA20016210	498	81470	2137
	HSYRA20016310	499	3171105	2138
	IMR3210000440	500	3131560	2139
	IMR3210000740	501	12151616	2140
50	IMR3210000750	502	7221054	2141
	IMR3210001580	503	1251249	2142
	IMR3210001650	504	9031391	2143
	IMR3210002420	505	1941255	2144
_	IMR3210002660	506	381423	2145
55	IMR3220002230	507	25945	2146
	IMR3220003020	508	4031425	2147
	IMR3220006090	509	8442	2148

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	IMR3220007420	510	15614	2149
	IMR3220007750	511	197>1670	2150
	IMR3220007910	512	9341515	2151
	IMR3220008380	513	2281142	2152
10	IMR3220008590	514	7561061	2153
10	IMR3220008630	515	941197	2154
	IMR3220009190	516	311293	2155
	IMR3220009350	517	20421	2156
	IMR3220009530	518	2394	2157
15	IMR3220009730	519	102>2141	2158
	IMR3220009840	520	246554	2159
	IMR3220011850	521	2711026	2160
	IMR3220012180	522	761521	2161
	IMR3220013170	523	3931028	2162
20	IMR3220013320	524	221140	2163
	IMR3220014350	525	8072027	2164
	IMR3220014910	526	79639	2165
	IMR3220016000	527	8532	2166
25	IMR3220017240	528	11141458	2167
	KIDNE10000080	529	3461233	2168
	KIDNE10000280	530	18642181	2169
	KIDNE10000500	531	6621108	2170
	KIDNE10001040	532	1151656	2171
30	KIDNE10001430	533	5601051	2172
	KIDNE10001450	534	7483	2173
	KIDNE10001520	535	74712	2174
	KIDNE20000410	536	7121215	2175
35	KIDNE20000510	537	1881717	2176
50	KIDNE20000700	538	8432135	2177
	KIDNE20000850	539	191071	2178
	KIDNE20001670	540	7271725	2179
	KIDNE20001920	541	16482070	2180
40	KIDNE20002440	542	163468	2181
	KIDNE20002450	543	12731653	2182
	KIDNE20002660	544	19292249	2183
	KIDNE20003150	545	9261306	2184
45	KIDNE20003300	546	12052230	2185
43	KIDNE20003490	547	2191523	2186
	KIDNE20003750	548	7321568	2187
	KIDNE20004030	549	1943142	2188
	KIDNE20004220	550	16992217	2189
50	KIDNE20004970	551	2741479	2190
	KIDNE20005130	552	4041417	2191
	KIDNE20005170	553	57944	2192
	KIDNE20005190	554	5301045	2193
5.5	KIDNE20005740	555	321309	2194
55	KIDNE20O3185	556	1050>1998	2195
	KIDNE20033050	557	1211719	2196
	KIDNE20033350	558	19992304	2197

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	KĪDNĒ20033570 -	559	269634	2198
	KIDNE20033730	560	4082366	2199
	KIDNE20033770	561	12561603	2200
	KIDNE20037520	562	10321637	2201
	KIDNE20039410	563	263928	2202
10	KIDNE20039940	564	1331134	2203
	KIDNE20040340	565	460768	2204
	KIDNE20040540	566	51276	2205
	KIDNE20040840	567	5>3343	2206
15	KIDNE20042620	568	13121716	2207
	KIDNE20042940	569	213611	2208
	KIDNE20042950	570	72476	2209
	KIDNE20043440	571	492136	2210
	KIDNE20044110	572	1671708	2211
20	KIDNE20045200	573	14551955	2212
	KIDNE20045340	574	44919	2213
	KIDNE20045790	575	15612085	2214
	KIDNE20046810	576	3981066	2215
25	KIDNE20048280	577	1242010	2216
	KIDNE20048640	578	14371775	2217
	KIDNE20048790	579	348701	2218
	KIDNE20049810	580	9092108	2219
	KIDNE20050420	581	1832351	2220
30	KIDNE20052960	582	11051461	2221
	KIDNE20053360	583	10541470	2222
	KIDNE20054000	584	12461596	2223
	KIDNE20054770	585	991511	2224
35	KIDNE20056290	586	3981306	2225
	KIDNE20056760	587	3751493	2226
	KIDNE20059080	588	44>2546	2227
	KIDNE20059370	589	16832018	2228
	KIDNE20060140	590	521572	2229
40	KIDNE20060300	591	42530	2230
	KIDNE20060530	592	1362208	2231
	KIDNE20060620	593	31687	2232
	KIDNE20061490	594	8241327	2233
45	KIDNE20062480	595	649963	2234
	KIDNE20062990	596 507	721334	2235
	KIDNE20063530	597	7101105	2236
	KIDNE20063760 KIDNE20066520	598 599	13321724	2237 2238
			112435	
50	KIDNE20067600	600	6771795 54 2228	2239
	KIDNE20067750	601 602	542228	2240 2241
	KIDNE20068800	i	10481473	
	KIDNE20070050 KIDNE20070770	603 604	16722001 6101845	2242 2243
55	KIDNE20070770 KIDNE20071860	605	16621973	2244
	KIDNE20073280	606	241898	2244
	KIDNE20073520	607	3322140	2245
ļ	MDNE200/3020	007	3322140	4440

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	KIDNE20073560	608	171497	2247
	KIDNE20074220	609	14961879	2248
	KIDNE20075690	610	231911	2249
	KIDNE20078100	611	7141373	2250
	KIDNE20078110	612	1661482	2251
10	LIVER10000580	613	17042108	2252
	LIVER10000670	614	332063	2253
	LIVER10000790	615	981072	2254
	LIVER10000990	616	14512065	2255
15	LIVER10001040	617	7101759	2256
į	LIVER10001110	618	549878	2257
	LIVER10001750	619	17372156	2258
	LIVER10002300	620	8611565	2259
	LIVER10002780	621	22352699	2260
20	LIVER10003030	622	23102621	2261
	LIVER10004330	623	222130	2262
	LIVER10005420	624	1312035	2263
	LIVER20000330	625	135839	2264
25	LIVER20000370	626	11582138	2265
	LIVER20004160	627	16251966	2266
	LIVER20004460	628	8821307	2267
	LIVER20005150	629	14532262	2268
	MAMGL10000320	630	711792	2269
30	MAMGL10000350	631	3072721	2270
	MAMGL10000560	632	78623	2271
	MAMGL10001780	633	10191618	2272
	MAMGL10001820	634	921405	2273
35	MAMGL10001840	635	6361181	2274
••	MESAN10000350	636	3621843	2275
	MESAN10001010	637	542279	2276
	MESAN10001470	638	15711906	2277
	MESAN10001800	639	4821900	2278
40	MESAN20000920	640	5462213	2279
	MESAN20001490	641	652>2706	2280
	MESAN20002670	642	10921535	2281
	MESAN20002910	643	16252269	2282
45	MESAN20003370	644	198521	2283
,	MESAN20005010	645	1831550	2284
	NB9N410000470	646	329>1714	2285
	NB9N410001210	647	741786	2286
	NB9N410001350	648	194619	2287
50	NB9N410001460	649	6781136	2288
	NB9N420000420	650	596928	2289
	NB9N420001040	651	122030	2290
	NB9N420004950	652	19292648	2291
55	NESOP10000870	653	7931554	2292
-	NHNPC10000840	654	720>1934	2293
	NHNPC10001010	655	119541	2294
	NHNPC10001240	656	15131860	2295

Table 1 (continued)

			January 1999	
	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	NHNPC20002060	657	1131351	2296
	NHNPC20002120	658	981195	2297
	NT2NE10000040	659	274618	2298
	NT2NE10000140	660	232>2244	2299
	NT2NE10000180	661	1311189	2300
10	NT2NE10000230	662	172483	2301
	NT2NE10000630	663	1751317	2302
	NT2NE10000730	664	5851364	2303
	NT2NE10000830	665	5561179	2304
15	NT2NE10001200	666	431874	2305
15	NT2NE10001630	667	6001013	2306
	NT2NE10001850	668	231960	2307
	NT2NE20000380	669	408962	2308
	NT2NE20000560	670	93>1858	2309
20	NT2NE20000640	671	7311063	2310
	NT2NE20001740	672	11638	2311
	NT2NE20002140	673	562053	2312
	NT2NE20002590	674	233961	2313
	NT2NE20002990	675	1171565	2314
25	NT2NE20003270	676	127>2256	2315
	NT2NE20003270	677	534893	2316
	NT2NE20003840	678	912403	2317
	NT2NE20003040	679	372749	2318
30	NT2NE20003920	680	31852	2319
-	NT2NE20004700	681	15692048	2320
	NT2NE20005170	682	217990	2321
	NT2NE20005170	683	14121717	2322
	NT2NE20005500	684	5741605	2323
35	NT2NE20005860	685	289996	2324
	NT2NE20003860 NT2NE20006360	686	1383>2954	2325
	NT2NE20006580	687	9372073	2326
	NT2NE20000380	688	6401053	2327
40		689		
40	NT2NE20007630		11679	2328
	NT2NE20007870	690 601	5081092	2329
	NT2NE20008020	691	420776	2330
	NT2NE20008090	692 693	3281995	2331 2332
45	NT2NE20009800		5471164	
	NT2NE20011560	694	781037	2333
	NT2NE20012470	695	204614	2334
	NT2NE20013240	696	7471079	2335
	NT2NE20013370	697	12292533	2336
50	NT2NE20013640	698	18542264	2337
	NT2NE20013720	699	159695	2338
	NT2NE20014030	700	14662263	2339
	NT2NE20014280	701	439903	2340
55	NT2NE20014350	702	6841190	2341
	NT2NE20015300	703	120>2517	2342
	NT2NE20016230	704	7131111	2343
	NT2NE20016260	705	5281721	2344

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	NT2NE20016340	706	5751945	2345
	NT2NE20016480	707	5388	2346
	NT2NE20016660	708	349918	2347
	NT2NE20016970	709	48566	2348
	NT2NE20034080	710	1191606	2349
10	NT2NE20035690	711	969>2204	2350
	NT2NE20044900	712	4311039	2351
	NT2NE20047160	713	6581707	2352
	NT2NE20053710	714	4061020	2353
15	NT2NE20054410	715	9751715	2354
	NT2NE20055170	716	50955	2355
	NT2NE20057200	717	205879	2356
	NT2RI10000160	718	2901270	2357
	NT2RI10000270	719	330809	2358
20	NT2RI10000480	720	5021068	2359
	NT2RI10001640	721	4>2060	2360
	NT2RI20000640	722	13911894	2361
	NT2RI20002700	723	8491253	2362
25	NT2RI20002820	724	1951781	2363
	NT2RI20002940	725	63467	2364
	NT2RI20003410	726	1481878	2365
	NT2RI20004120	727	231600	2366
	NT2RI20004210	728	4771367	2367
30	NT2RI20005970	729	3091562	2368
	NT2RI20006690	730	206>2507	2369
	NT2RI20006710	731	8841654	2370
	NT2RI20006850	732	5502235	2371
35	NT2RI20007380	733	8431208	2372
	NT2RI20008650	734	6921045	2373
	NT2RI20009740	735	287595	2374
	NT2RI20010100	736	1501727	2375
40	NT2RI20010830	737	2952325	2376
40	NT2RI20010910	738	3611254	2377
	NT2RI20012350 NT2RI20012440	739	9691331	2378
	NT2RI20012440 NT2RI20013420	740 741	10261367	2379
	NT2RI20013420 NT2RI20013850	741 742	6506 8381497	2380   2381
45	NT2RI20013030	743	571739	2382
	NT2RI20014100	744	12801612	2383
	NT2RI20014490	745	2442247	2384
	NT2RI20014490 NT2RI20014500	746	4512331	2385
50	NT2RI20015190	747	3881671	2386
1	NT2RI20015400	748	4542277	2387
	NT2RI20015950	749	5751078	2388
	NT2RI20016210	750	5711113	2389
	NT2RI20016570	751	2381026	2390
55	NT2RI20017260	752	11431703	2391
Ì	NT2RI20018460	753	64>2603	2392
	NT2RI20018660	754	2451672	2393
F		-,		

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	G.G.I.G (I.G.III.G	sequence	1 00111011 01 020	sequence
5	NT2RI20020220	755	5711485	2394
J	NT2RI20020410	756	398850	2395
	NT2RI20021520	757	5051482	2396
	NT2RI20022430	758	11350	2397
	NT2RI20022520	759	11651629	2398
10	NT2RI20022700	760	5321401	2399
	NT2RI20025170	761	901727	2400
	NT2RI20025300	762	570>2759	2401
	NT2RI20025410	763	151757	2402
15	NT2RI20025540	764	170>2080	2403
7.5	NT2RI20025850	765	2451816	2404
	NT2RI20026540	766	1911555	2405
	NT2RI20028020	767	1420	2406
	NT2RI20028520	768	120692	2407
20	NT2RI20029260	769	12531714	2408
	NT2RI20029580	770	3502023	2409
	NT2RI20029700	771	312881	2410
	NT2RI20030110	772	248862	2411
25	NT2RI20030190	773	43357	2412
23	NT2RI20030510	774	13171715	2413
	NT2RI20030670	775	7141046	2414
	NT2RI20031540	776	841538	2415
	NT2RI20032050	777	6982797	2416
30	NT2RI20032220	778	640>2800	2417
	NT2RI20033010	779	6522898	2418
	NT2RI20033040	780	408794	2419
	NT2RI20033380	781	1211374	2420
35	NT2RI20033440	782	6501687	2421
	NT2RI20033830	783	165929	2422
	NT2RI20035560	784	271883	2423
	NT2RI20036780	785	5132585	2424
	NT2RI20036950	786	3552445	2425
40	NT2RI20037510	787	5911589	2426
	NT2RI20040590	788	6051597	2427
	NT2RI20041900	789	86442	2428
	NT2RI20042840	790	7601083	2429
45	NT2RI20043040	791	2361867	2430
	NT2RI20043980	792	76549	2431
	NT2RI20044420	793	10801454	2432
	NT2RI20046060	794	7821480	2433
	NT2RI20047830	795	297623	2434
50	NT2RI20048400	796	16324	2435
	NT2RI20049160	797	6681054	2436
	NT2RI20049840	798	12662060	2437
	NT2RI20049850	799	7831973	2438
55	NT2RI20050610	800	192301	2439
	NT2RI20050870	801	1012056	2440
	NT2RI20051500	802	2361246	2441
ļ	NT2RI20053350	803	1282125	2442

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	NT2RI20053680 ~	804	310>2430	2443
	NT2RI20055640	805	681171	2444
	NT2RI20056280	806	14931954	2445
	NT2RI20056470	807	2722098	2446
	NT2RI20057230	808	118>1116	2447
10	NT2RI20058110	809	1451566	2448
	NT2RI20058510	810	1072050	2449
	NT2RI20060710	811	2741278	2450
	NT2RI20060720	812	782354	2451
15	NT2RI20061270	813	14352	2452
	NT2RI20061830	814	9061580	2453
	NT2RI20062100	815	14652487	2454
	NT2RI20063450	816	278745	2455
	NT2RI20064120	817	2811321	2456
20	NT2RI20064870	818	6471138	2457
	NT2RI20065060	819	631193	2458
	NT2RI20065530	820	6441135	2459
	NT2RI20066670	821	23598	2460
25	NT2RI20066790	822	2721747	2461
	NT2RI20066820	823	1451173	2462
	NT2RI20067030	824	581368	2463
	NT2RI20067350	825	100>2451	2464
	NT2RI20067880	826	25732	2465
30	NT2RI20068250	827	1232246	2466
	NT2RI20068550	828	2501656	2467
	NT2RI20070480	829	4831844	2468
	NT2RI20070840	830	25600	2469
35	NT2RI20070960	831	212>2749	2470
	NT2RI20071160	832	9211643	2471
}	NT2RI20071330	833	1592105	2472
	NT2RI20071480	834	821155	2473
	NT2RI20072140	835	8451192	2474
40	NT2RI20072540	836	4831394	2475
	NT2RI20073030	837	9141351	2476
	NT2RI20073840	838	2021569	2477
	NT2RI20073860	839	150506	2478
45	NT2RI20074390	840	601916	2479
	NT2RI20074690	841	430>2130	2480
	NT2RI20074980	842	1751269	2481
	NT2RI20075070	843	10641513	2482
	NT2RI20075720	844	1931758	2483
50	NT2RI20075890	845	9271520	2484
	NT2RI20077230	846	79741	2485
	NT2RI20077290	847	101793	2486
	NT2RI20077510	848	455766	2487
55	NT2RI20077540	849	5271075	2488
	NT2RI20078270	850	61717	2489
	NT2RI20078790	851	3911020	2490
	NT2RI20078840	852	6352410	2491

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	NT2RI20078910	853	3341524	2492
	NT2RI20080500	854	2291767	2493
	NT2RI20081880	855	1581180	2494
	NT2RI20082210	856	4491120	2495
	NT2RI20083360	857	601898	2496
10	NT2RI20083960	858	164919	2497
	NT2RI20084810	859	8631384	2498
	NT2RI20085260	860	347709	2499
	NT2RI20085980	861	357>2020	2500
15	NT2RI20086560	862	478798	2501
	NT2RI20087140	863	108443	2502
	NT2RI20087490	864	4981862	2503
	NT2RI20087910	865	5081011	2504
	NT2RI20088010	866	316759	2505
20	NT2RI20088120	867	10684	2506
	NT2RI20089420	868	6261099	2507
	NT2RI20090650	869	411594	2508
	NT2RI20090660	870	651852	2509
25	NT2RI20090830	871	9881713	2510
	NT2RI20091440	872	2161037	2511
	NT2RI20092150	873	574>2918	2512
	NT2RI20092890	874	6512471	2513
	NT2RI20094060	875	171030	2514
30	NT2RP60000080	876	22492614	2515
	NT2RP60000170	877	128928	2516
	NT2RP60000320	878	272108	2517
	NT2RP60000350	879	5531734	2518
35	NT2RP60000390	880	455829	2519
	NT2RP60000590	881	20672381	2520
	NT2RP60000720	882	11362104	2521
	NT2RP60000860	883	7660	2522
40	NT2RP60001000	884	4741694	2523
40	NT2RP60001090	885	4422136	2524
	NT2RP60001230	886 887	781937 8581652	2525 2526 .
	NT2RP60001270 NT2RP70000410	888	8011103	2527
	NT2RP70000410 NT2RP70000690	889	2593270	2527
45	NT2RP70000090	890	9541295	2529
	NT2RP70002380	891	2311208	2530
	NT2RP70002590	892	202993	2531
	NT2RP70002390	893	26A 1619	2532
50	NT2RP70003640	894	26172994	2533
50	NT2RP70003040 NT2RP70003910	895	14921797	2534
	NT2RP70004250	896	2611115	2535
	NT2RP70004770	897	11322541	2536
	NT2RP70005790	898	9401257	2537
55	NT2RP70006240	899	261756	2538
	NT2RP70008120	900	90476	2539
	NT2RP70009060	901	21973105	2540

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	   NITODD	sequence 902	1322060	sequence
5	NT2RP70010800	903		2541
	NT2RP70011660	904	53619	2542
	NT2RP70012310 NT2RP70013060	905	81756	2543
		906	15332693	2544
10	NT2RP70013350	907	3962096	2545
	NT2RP70015910	908	141492	2546
	NT2RP70018560 NT2RP70021510	909	1671561	2547
	NT2RP70021510	910	209538	2548
	NT2RP70022430	911	2692617 923292	2549
15	NT2RP70023790	912	10222797	2550 2551
	NT2RP70023790	913		
	NT2RP70024490	914	223888	2552
	NT2RP70024500	915	3331652 191532	2553
20	NT2RP70025340	916	1277>3059	2554
	NT2RP70028190	917	522169	2555 2556
	NT2RP70028290	918		
	NT2RP70028410	919	363983	2557 2558
	NT2RP70029750	920	691226 2832847	2559
25	NT2RP70029820	921	1992325	2560
	NT2RP70029820	922	58480	2561
	NT2RP70030550	923	1481854	2562
	NT2RP70030910	924	21862785	2563
30	NT2RP70032030	925	2141584	2564
	NT2RP70033040	926	2941166	2565
	NT2RP70036290	927	4902808	2566
	NT2RP70036320	928	5501002	2567
	NT2RP70036470	929	3403312	2568
35	NT2RP70036800	930	1512307	2569
	NT2RP70039600	931	2543121	2570
	NT2RP70040800	932	5921587	2571
	NT2RP70042040	933	8551946	2572
40	NT2RP70042330	934	4342908	2573
	NT2RP70042600	935	4282539	2574
	NT2RP70043730	936	3122828	2575
	NT2RP70043960	937	173181	2576
	NT2RP70045410	938	82>3154	2577
45	NT2RP70046560	939	412593	2578
	NT2RP70046870	940	472995	2579
	NT2RP70047510	941	29394	2580
	NT2RP70047660	942	9581332	2581
50	NT2RP70047900	943	15531870	2582
	NT2RP70049150	944	4362349	2583
	NT2RP70049250	945	1001356	2584
	NT2RP70049750	946	14832013	2585
	NT2RP70052050	947	20142481	2586
55	NT2RP70052190	948	24413	2587
	NT2RP70054680	949	11921563	2588
	NT2RP70054930	950	214579	2589



Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
	   NT2RP70055020	951	  -   7741142	2590
5	NT2RP70055130	952	1751791	2591
	NT2RP70055200	953	13881879	2592
	NT2RP70061620	954	12412518	2593
	NT2RP70061880	955	161>3222	2594
10	NT2RP70062960	956	6043786	2595
	NT2RP70063040	957	2771701	2596
	NT2RP70063740	958	525908	2597
	NT2RP70064080	959	189974	2598
4-	NT2RP70064900	960	742332	2599
15	NT2RP70065270	961	2612756	2600
	NT2RP70066210	962	12941926	2601
	NT2RP70067010	963	342662	2602
	NT2RP70069800	964	15201972	2603
20	NT2RP70069860	965	1321964	2604
	NT2RP70071140	966	18122342	2605
	NT2RP70071540	967	6941776	2606
	NT2RP70071770	968	282103	2607
25	NT2RP70072210	969	205 1944	2608
25	NT2RP70072520	970	79>3136	2609
	NT2RP70073590	971	21332525	2610
	NT2RP70073810	972	171683	2611
	NT2RP70074060	973	248739	2612
30	NT2RP70074220	974	367726	2613
	NT2RP70075040	975	365>3111	2614
	NT2RP70075370	976	2531710	2615
	NT2RP70076100	977	2802415	2616
35	NT2RP70076170	978	741717	2617
	NT2RP70076430	979	4612788	2618
	NT2RP70079250	980	3653256	2619
	NT2RP70079300	981	240554	2620
	NT2RP70079750	982	9542867	2621
40	NT2RP70081330	983	1871458	2622
	NT2RP70081370	984	2792876	2623
	NT2RP70081420	985	12461719	2624
	NT2RP70081440	986	10131501	2625
45	NT2RP70081670	987	473034	2626
	NT2RP70083150	988	118>3979	2627
	NT2RP70084060	989	47847	2628
	NT2RP70084410	990	115>3256	2629
	NT2RP70084870	991	701422	2630
50	NT2RP70085500	992	1703274	2631
	NT2RP70085570	993	3022035	2632
	NT2RP70086230	994	7991203	2633
	NT2RP70087200	995	2112583 571529	2634
55	NT2RP70088550	996		2635
	NT2RP70090120 NT2RP70090190	997 998	522397 13582545	2636 2637
	NT2RP70090190 NT2RP70091490	999	18764	2638
Į	1412NF/0031430	333	10704	2000

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	NT2RP70091680	1000	20642618	2639
	NT2RP70092150	1001	5481	2640
	NT2RP70092360	1002	116>3870	2641
	NT2RP70092590	1003	1482256	2642
	NT2RP70093220	1004	333 2783	2643
10	NT2RP70093630	1005	13721710	2644
	NT2RP70093700	1006	1242220	2645
	NT2RP70093730	1007	2122389	2646
	NT2RP70093940	1008	1352909	2647
15	NT2RP70093970	1009	8301705	2648
	NT2RP70094290	1010	7051046	2649
	NT2RP70094660	1011	76393	2650
ĺ	NT2RP70094810	1012	943705	2651
	NT2RP70094980	1013	382905	2652
20	NT2RP70095020	1014	24512768	2653
	NT2RP70095070	1015	228638	2654
	NTONG10000330	1016	92423	2655
	NTONG10000520	1017	831501	2656
25	NTONG10000980	1018	5761703	2657
	NTONG10001230	1019	3181967	2658
	NTONG10001300	1020	2231839	2659
	NTONG10001820	1021	6771558	2660
	NTONG10002140	1022	141207	2661
30	NTONG10002460	1023	2421561	2662
	NTONG10002570	1024	107658	2663
	NTONG10002640	1025	2632131	2664
	NTONG20002650	1026	1772696	2665
35	NTONG20003340	1027	322996	2666
	NTONG20003630	1028	183>2114	2667
	NTONG20004920	1029	16931998	2668
1	NTONG20005830 NTONG20008000	1030 1031	268624 1601503	2669 2670
40	NTONG20008000 NTONG20008780	1031	2641829	2671
70	NTONG20008780 NTONG20009660	1032	121199	2672
	NTONG20009850	1034	32388	2672
	NTONG20003830 NTONG20011370	1035	123440	2674
	NTONG20011370 NTONG20012220	1036	109447	2675
45	NTONG20014280	1037	47367	2676
- 1	NTONG20015500	1038	3881416	2677
	NTONG20016120	1039	272267	2678
	OCBBF10000420	1040	457894	2679
50	OCBBF10000670	1041	6941149	2680
	OCBBF10000860	1042	1465	2681
	OCBBF10000910	1043	3973999	2682
	OCBBF10001040	1044	8691288	2683
	OCBBF10001180	1045	108977	2684
55	OCBBF10001190	1046	1712444	2685
	OCBBF10001220	1047	2352259	2686
	OCBBF20000130	1048	2112301	2687

Table 1 (continued)

	Class same	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	Clone name	sequence	Position of CD3	sequence
	OCBBF20001260	1049	   17332107	2688
5	OCBBF20001200	1050	3021870	2689
	OCBBF20002770	1051	191374	2690
	OCBBF20002770	1052	1874>2191	2691
	OCBBF20007190	1053	4572277	2692
10	OCBBF20008240	1054	462169	2693
	OCBBF20009040	1055	2732030	2694
	OCBBF20009980	1056	152526	2695
	OCBBF20010750	1057	221655	2696
	OCBBF20011010	1058	11323	2697
15	OCBBF20011240	1059	313>2823	2698
	OCBBF20011400	1060	144>3731	2699
	OCBBF20011760	1061	1391815	2700
	OCBBF20012100	1062	1071840	2701
20	OCBBF20013070	1063	1771199	2702
	OCBBF20014020	1064	174>2999	2703
	OCBBF20014080	1065	80646	2704
	OCBBF20014940	1066	1603648	2705
	OCBBF20015270	1067	539>2338	2706
25	OCBBF20015280	1068	79>2727	2707
	OCBBF20015860	1069	201827	2708
	OCBBF20017060	1070	10651463	2709
	PANCR10000210	1071	42863	2710
30	PANCR10001850	1072	77379	2711
	PEBLM10000290	1073	12941722	2712
	PEBLM10000340	1074	121814	2713
	PEBLM10000680	1075	13301923	2714
35	PEBLM10001440	1076	1542799	2715
33	PEBLM10001800	1077	10721509	2716
	PEBLM20000300	1078	15382563	2717
	PEBLM20001120	1079	1752934	2718
	PEBLM20001260	1080	25352918	2719
40	PEBLM20001470	1081	306698	2720
	PEBLM20002130	1082	35979	2721
	PEBLM20002480	1083	1621334	2722
	PEBLM20002700	1084	1701762	2723
45	PEBLM20003080	1085	6691685	2724
70	PEBLM20003950	1086	285881	2725
	PEBLM20004790	1087	3411798	2726
	PLACE50000370	1088	9861912	2727
	PLACE50000580	1089	3873224	2728
50	PLACE50000670	1090	25062874	2729
	PLACE50000680	1091	4072119	2730
	PLACE50000800	1092	488>3266	2731
	PLACE50001050	1093	4172234	2732
55	PLACE50001130	1094	124397	2733
	PLACE50001530	1095	18742224	2734
	PLACE50001700	1096	802140	2735
	PLACE60000440	1097	12551575	2736

Table 1 (continued)

į	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
5	PLACE60000700	1098	250684	2737
	PLACE60000800	1099	15701995	2738
	PLACE60001370	1100	11261521	2739
	PLACE60002050	1101	2431175	2740
	PLACE60002630	1102	15742191	2741
10	PLACE60003710	1103	11701517	2742
	PLACE60003790	1104	9081564	2743
	PLACE60004240	1105	243845	2744
	PLACE60004290	1106	17922154	2745
15	PLACE60005230	1107	449994	2746
	PLACE60005500	1108	447791	2747
	PLACE60005550	1109	140631	2748
	PLACE60009530	1110	8337	2749
	PLACE60012810	1111	762601	2750
20	PLACE60012940	1112	159587	2751
	PLACE60014430	1113	2151816	2752
	PLACE60018860	1114	941614	2753
	PLACE60019230	1115	174524	2754
25	PLACE60019250	1116	1562>2068	2755
	PLACE60020160	1117	41412	2756
	PLACE60020840	1118	6541382	2757
	PLACE60021020	1119	106600	2758
	PLACE60021510	1120	2611871	2759
30	PLACE60024190	1121	151145	2760
	PLACE60026680	1122	3321924	2761
	PLACE60026920	1123	1333	2762
	PLACE60026990	1124	39836	2763
35	PLACE60029490	1125	130477	2764
	PLACE60030380	1126	281149	2765
	PLACE60030940	1127	61720	2766
	PLACE60031090	1128	6501270	2767
40	PLACE60032040	1129	110448	2768
**	PLACE60033720 PLACE60033990	1130	5951053	2769
		1131	4031173	2770
	PLACE60037050 PLACE60037400	1132 1133	4851159 597923	2771 2772
	PLACE60037450	1134	112558	2773
45	PLACE60038500	1135	7341264	2774
	PLACE60040050	1136	15599	2775
	PLACE60043120	1137	162731	2776
	PLACE60043360	1138	18992225	2777
50	PLACE60043960	1139	1291754	2778
•	PLACE60043970	1140	2081842	2779
ľ	PLACE60044540	1141	22>2582	2780
	PLACE60044640	1142	3192100	2781
	PLACE60044910	1143	12491572	2782
55	PLACE60046630	1144	11081620	2783
İ	PLACE60046870	1145	37471	2784
	PLACE60047380	1146	3841250	2785
Į				

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
_	PLACE60049310	1147	18320	2786
5	PLACE60049930	1148	13241641	2787
	PLACE60050290	1149	220606	2788
	PROST10001520	1150	18472149	2789
	PROST10001670	1151	6081660	2790
10	PROST10002200	1152	137988	2791
	PROST10002460	1153	12401713	2792
	PROST10002720	1154	114689	2793
	PROST10003430	1155	2592445	2794
15	PROST10005260	1156	12141591	2795
10	PROST10005360	1157	2402477	2796
	PROST10005640	1158	139525	2797
	PROST20000360	1159	15801969	2798
	PROST20000530	1160	14391825	2799 .
20	PROST20001760	1161	441276	2800
	PROST20002060	1162	10721506	2801
	PROST20002670	1163	547897	2802
	PROST20002730	1164	10701477	2803
25	PROST20002740	1165	15571910	2804
20	PROST20003250	1166	96965	2805
	PROST20004630	1167	495815	2806
	PROST20017390	1168	122505	2807
	PROST20017960	1169	14011829	2808
30	PROST20018230	1170	891447	2809
	PROST20018990	1171	20242953	2810
	PROST20019980	1172	15441852	2811
	PROST20021620	1173	14391918	2812
35	PROST20023380	1174	11559	2813
	PROST20025910	1175	94408	2814
	PROST20026820	1176	4111511	2815
	PROST20028420	1177	11731607	2816
	PROST20029600	1178	245856	2817
40	PROST20031020	1179	201456	2818
	PROST20031170	1180	1631578	2819
	PROST20032100	1181	821671	2820
	PROST20032320	1182	25373004	2821
45	PROST20033020	1183	15501906	2822
	PROST20033030	1184	247567	2823
	PROST20033380	1185	191524	2824
	PROST20033400	1186	294647	2825
	PROST20034720	1187	2801764	2826
50	PROST20037320	1188	10011414	2827
	PROST20039220	1189	17902416	2828
	PROST20043320	1190	2781843	2829
	PROST20044160	1191	435866	2830
55	PROST20044810	1192	14421759	2831
	PROST20051210	1193	4051217	2832
	PROST20051430	1194	76540	2833
ļ	PROST20054260	1195	56952	2834

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	   PROST20056040	sequence 1196	12351552	sequence
5	PROST20058800	1197	179493	2836
	PROST20058000	1198	94483	2837
	PROST20059190	1199	14751792	2838
	PROST20039430	1200	7393	2839
10	PROST20061900	1200	1452367	2840
	PROST20064500	1202	146466	2841
	PROST20067370	1202	12191944	2842
	PROST20069880	1203	452252	2843
	PROST20003800	1205	1392256	2844
15	PROST20072890	1206	16642632	2845
	PROST20073170	1207	1661905	2846
	PROST20073890	1208	10221324	2847
	PROST20079740	1209	147527	2848
20	PROST20085160	1210	63734	2849
	PROST20094830	1211	582328	2850
	PUAEN10000570	1212	1272220	2851
	PUAEN10000810	1213	3182234	2852
	PUAEN10001610	1214	5823794	2853
25	PUAEN10003220	1215	173946	2854
	SALGL10000050	1216	298933	2855
	SALGL10000470	1217	11619	2856
	SALGL10000650	1218	193543	2857
30	SALGL10001570	1219	2691282	2858
	SKMUS10000140	1220	681234	2859
	SKMUS10000220	1221	1021367	2860
	SKMUS10000640	1222	1371198	2861
	SKMUS10001040	1223	2401100	2862
35	SKMUS10001180	1224	3001076	2863
	SKMUS10001240	1225	35>1069	2864
	SKMUS10001290	1226	66749	2865
	SKMUS10001770	1227	2031276	2866
40	SKMUS20000740	1228	261135	2867
	SKMUS20001170	1229	1051019	2868
	SKMUS20002710	1230	171174	2869
	SKMUS20003430	1231	163861	2870
45	SKMUS20003650	1232	32388	2871
45	SKMUS20003900	1233	135 1112	2872
	SKMUS20004580	1234	166>1905	2873
	SKMUS20004670	1235	141443	2874
	SKMUS20004680	1236	4453	2875
50	SKMUS20007240	1237	1071120	2876
	SKMUS20007740	1238	661061	2877
	SKMUS20008470	1239	183524	2878
	SKMUS20008630	1240	2941727	2879
55	SKMUS20009020	1241	3961631	2880
	SKMUS20009330	1242	96752	2881
İ	SKMUS20009450	1243	7961149	2882
Į	SKMUS20009540	1244	1931260	2883

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
5	SKMUS20010080	1245	210839	2884
,	SKMUS20011290	1246	1161375	2885
	SKMUS20011470	1247	255968	2886
	SKMUS20013640	1248	117476	2887
	SKMUS20014920	1249	199942	2888
10	SKMUS20015010	1250	178921	2889
	SKMUS20015430	1251	53847	2890
	SKMUS20016080	1252	1451026	2891
	SKMUS20016310	1253	385876	2892
15	SKMUS20016340	1254	274>1622	2893
	SKMUS20016620	1255	30806	2894
	SKMUS20016680	1256	1961290	2895
	SKMUS20016710	1257	30722	2896
	SKNMC10000070	1258	12651594	2897
20	SKNMC10000100	1259	296694	2898
	SKNMC10000190	1260	12191578	2899
	SKNMC10000290	1261	388789	2900
	SKNMC10001100	1262	405920	2901
25	SKNMC10001590	1263	7201991	2902
25	SKNMC10001680	1264	11871927	2903
	SKNMC10002290	1265	17982472	2904
	SKNMC10002510	1266	2652565	2905
	SKNMC10002640	1267	68718	2906
30	SKNMC20000650	1268	551758	2907
	SKNMC20000970	1269	3402028	2908
	SKNMC20002240	1270	7971939	2909
	SKNMC20003050	1271	154>1168	2910
35	SKNMC20003220	1272	3511091	2911
33	SKNMC20003560	1273	69650	2912
	SKNMC20005930	1274	3631262	2913
	SKNMC20006120	1275	1176 1589	2914
	SKNMC20010570	1276	79 2085	2915
40	SKNMC20011130	1277	98955	2916
	SKNMC20015030	1278	11291689	2917
	SKNMC20015550	1279	4631035	2918
	SKNMC20015960	1280	74>3352	2919
45	SKNSH10000860	1281	7861250	2920
	SKNSH10001740	1282	3611458	2921
	SKNSH10003010	1283	4641669	2922
	SKNSH10003080	1284	389871	2923
	SKNSH20001510	1285	462776	2924
50	SKNSH20001630	1286	1087 1596	2925
	SKNSH20003470	1287	390863	2926
	SMINT10000160	1288	1581729	2927
	SMINT10000390	1289	7401045	2928
55	SMINT10000420	1290	76>2645	2929
	SMINT10000540	1291	97636	2930
	SMINT10000570	1292	701545	2931
Į	SMINT10000710	1293	1763>2065	2932

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	Clone name	sequence	1 camon or obo	sequence
5	SMINT10001000	1294	- <u>27470</u>	2933
5	SMINT10001030	1295	4152226	2934
	SMINT10001180	1296	11761487	2935
	SMINT20000180	1297	14661879	2936
	SMINT20000400	1298	243548	2937
10	SMINT20001450	1299	11718	2938
	SMINT20002270	1300	14271819	2939
	SMINT20002390	1301	517885	2940
	SMINT20002770	1302	2201167	2941
15	SMINT20003960	1303	5 2851	2942
-	SMINT20004000	1304	408899	2943
	SMINT20005450	1305	10011387	2944
	SMINT20005580	1306	17002029	2945
	SPLEN10000490	1307	271364	2946
20	SPLEN10000910	1308	7421347	2947
	SPLEN10001430	1309	165695	2948
	SPLEN20000200	1310	19742282	2949
	SPLEN20000470	1311	10301560	2950
25	SPLEN20000720	1312	8081842	2951
	SPLEN20001340	1313	611146	2952
	SPLEN20001970	1314	4141310	2953
	SPLEN20002420	1315	6611191	2954
	SPLEN20002430	1316	344763	2955
30	SPLEN20002670	1317	1638>3316	2956
	SPLEN20002700	1318	69440	2957
	SPLEN20003100	1319	10011321	2958
	SPLEN20003570	1320	9282322	2959
35	SPLEN20004430	1321	509817	2960
	SPLEN20004960	1322	17922175	2961
	SPLEN20005410	1323	12824	2962
40	STOMA10000470	1324	135533	2963
	STOMA10000520 STOMA10001170	1325 1326	17902170 1961818	2964 2965
40	STOMA10001170	1327	4101858	2966
	STOMA10001330 STOMA10001860	1328	3641476	2967
	STOMA10001800 STOMA20000320	1329	9431278	2968
	STOMA20000880	1330	18252286	2969
45	STOMA20001210	1331	1961458	2970
	STOMA20001880	1332	10681757	2971
:	STOMA20002570	1333	429746	2972
	STOMA20002890	1334	187801	2973
50	STOMA20003960	1335	5911748	2974
	STOMA20004780	1336	129554	2975
	STOMA20004820	1337	2061228	2976
	SYNOV10001280	1338	1112084	2977
	SYNOV10001640	1339	2061033	2978
55	SYNOV20001770	1340	359673	2979
	SYNOV20002910	1341	10851750	2980
	SYNOV20008200	1342	461>2203	2981

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	SYNOV20010140	1343	72458	2982
	SYNOV20011440	1344	2751468	2983
	SYNOV20013740	1345	1471472	2984
	SYNOV20014510	1346	89982	2985
	SYNOV20014570	1347	14881811	2986
10	SYNOV20016480	1348	132656	2987
	TESTI10000230	1349	11011415	2988
	TESTI10000250	1350	167 2032	2989
	TESTI10000420	1351	1751863	2990
15	TESTI10000510	1352	752297	2991
	TESTI10000550	1353	461185	2992
	TESTI10000640	1354	1061950	2993
	TESTI10000700	1355	2252042	2994
	TESTI10000960	1356	274978	2995
20	TESTI10001250	1357	10271641	2996
	TESTI10001270	1358	2081581	2997
	TESTI10001310	1359	381549	2998
	TESTI10001380	1360	7321868	2999
25	TESTI10001630	1361	2491298	3000
20	TESTI10001680	1362	1341390	3001
	TESTI10001790	1363	15771936	3002
	TESTI10001910	1364	9351786	3003
	TESTI20000180	1365	234563	3004
30	TESTI20000440	1366	1662238	3005
	TESTI20001200	1367	6641059	3006
	TESTI20001540	1368	2301684	3007
	TESTI20001770	1369	12092447	3008
35	TESTI20001790	1370	154747	3009
	TESTI20001840	1371	161962	3010
	TESTI20002070	1372	11611631	3011
	TESTI20002080	1373	17842425	3012
	TESTI20002380	1374	5281859	3013
40	TESTI20002530	1375	2891071	3014
	TESTI20003560	1376	6541013	3015
	TESTI20003720	1377	5781144	3016
	TESTI20004350	1378	97726	3017
45	TESTI20004620	1379	9161833	3018
	TESTI20005200	1380	1921379	3019
	TESTI20005910	1381	301469	3020
	TESTI20006000	1382	6451682	3021
	TESTI20006270	1383	72>2174	3022
50	TESTI20006710	1384	334645	3023
	TESTI20006950	1385	68>2012	3024
	TESTI20006990	1386	1342155	3025
	TESTI20007070	1387	561084	3026
55	TESTI20007620	1388	125961	3027
	TEST120007840	1389	363281	3028
	TESTI20008190	1390	8201236	3029
Į	TESTI20008300	1391	3231186	3030

Table 1 (continued)

	Class	OFO ID NO of avalentida	<del></del>	050 10 110 -4
	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence	- = =	sequence
5	TESTI20008490	1392	591333	3031
	TESTI20008830	1393	11311718	3032
	TESTI20009090	1394	562894	3033
	TESTI20009510	1395	2251115	3034
40	TESTI20009700	1396	841628	3035
10	TESTI20010080	1397	1565>2060	3036
	TESTI20010490	1398	7302349	3037
	TESTI20010820	1399	16091926	3038
	TESTI20011340	1400	2431346	3039
15	TESTI20011410	1401	4252725	3040
	TESTI20011800	1402	2281178	3041
	TESTI20012370	1403	2572071	3042
	TESTI20012690	1404	6602603	3043
	TESTI20013060	1405	125427	3044
20	TESTI20013300	1406	22>2563	3045
	TESTI20013450	1407	1871917	3046
	TESTI20013520	1408	334759	3047
	TESTI20014120	1409	1851384	3048
25	TESTI20014200	1410	2141299	3049
20	TESTI20015110	1411	612058	3050
	TESTI20015120	1412	5651287	3051
	TESTI20015560	1413	4001326	3052
	TESTI20015930	1414	11571468	3053
30	TESTI20016210	1415	11211474	3054
	TESTI20016610	1416	2803345	3055
	TESTI20016650	1417	21902549	3056
	TESTI20016710	1418	10712003	3057
25	TESTI20017580	1419	143676	3058
35	TESTI20017660	1420	317652	3059
	TESTI20017920	1421	84890	3060
	TESTI20018150	1422	8151993	3061
	TESTI20018260	1423	3101113	3062
40	TESTI20018270	1424	191899	3063
	TESTI20018290	1425	337>2156	3064
	TESTI20018520	1426	462211	3065
	TESTI20018620	1427	13551729	3066
	TESTI20018690	1428	11782425	3067
45	TESTI20018790	1429	4811821	3068
	TESTI20018980	1430	146559	3069
	TESTI20019500	1431	1261403	3070
	TESTI20019680	1432	11681509	3071
50	TESTI20019910	1433	3451601	3072
	TESTI20020020	1434	1547>1884	3073
	TESTI20020480	1435	255.569	3074
İ	TESTI20020570	1436	2171317	3075
	TESTI20020810	1437	1941498	3076
55	TESTI20020900	1438	811547	3077
	TESTI20021050	1439	682689	3078
	TESTI20021490	1440	451814	3079
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Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	TEST120022230	1441	205783	3080
	TESTI20022450	1442	591333	3081
	TESTI20022510	1443	972217	3082
	TESTI20022560	1444	172494	3083
	TESTI20022640	1445	260913	3084
10	TESTI20022940	1446	41469	3085
	TESTI20023610	1447	365949	3086
	TESTI20023690	1448	3361160	3087
	TESTI20024150	1449	4001080	3088
15	TESTI20024230	1450	1251339	3089
	TESTI20024610	1451	1811605	3090
	TESTI20024650	1452	451829	3091
	TESTI20024670	1453	13751845	3092
	TESTI20024980	1454	2611889	3093
20	TESTI20025160	1455	1331164	3094
	TESTI20025440	1456	2931819	3095
	TESTI20025800	1457	601022	3096
	TESTI20026320	1458	31414	3097
25	TESTI20026760	1459	8301663	3098
	TESTI20026980	1460	2121354	3099
	TESTI20027000	1461	22573	3100
	TESTI20027070	1462	881410	3101
	TESTI20027290	1463	1581333	3102
30	TESTI20027890	1464	104>1506	3103
	TESTI20028060	1465	15961970	3104
	TESTI20028400	1466	7401066	3105
	TESTI20028660	1467	11111995	3106
35	TESTI20029120	1468	2951920	3107
	TESTI20029650	1469	3911446	3108
	TESTI20030050	1470	21800	3109
	TESTI20030370	1471	2711368	3110
	TESTI20030590	1472	10281474	3111
40	TESTI20030710	1473	88666	3112
	TESTI20030740	1474	852055	3113
	TESTI20031090	1475	28>2034	3114
	TESTI20031170	1476	1881660	3115
45	TESTI20031300	1477	1572004	3116
	TESTI20031520	1478	1501862	3117
	TESTI20031930	1479	4741010	3118
	TESTI20031960	1480	32>1839	3119
	TESTI20032280	1481	189560	3120
50	TEST120032550	1482	242670	3121
	TESTI20032800	1483	14451873	3122
	TESTI20032990	1484	49411	3123
	TESTI20033250	1485	982041	3124
55	TESTI20033270	1486	48722	3125
	TESTI20033540	1487	3111930	3126
	TESTI20033560	1488	1931296	3127
Į	TESTI20033760	1489	294659	3128

Table 1 (continued)

	01	1 050 10 NO - 1 - 1 - 1 - 1	<del>,</del>	0501010
	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
		sequence		sequence
5	TESTI20034130	1490	109>2444	3129
	TESTI20034180	1491	11131484	3130
	TESTI20034190	1492	1201520	3131
	TESTI20034980	1493	2651185	3132
10	TESTI20035120	1494	3212585	3133
10	TESTI20035410	1495	7351208	3134
	TESTI20035510	1496	7341741	3135
	TESTI20035740	1497	411651	3136
	TESTI20035800	1498	12631583	3137
15	TESTI20035890	1499	2061507	3138
	TESTI20036250	1500	452216	3139
	TESTI20036490	1501	88459	3140
	TESTI20037270	1502	331391	3141
	TESTI20037810	1503	128520	3142
20	TESTI20038940	1504	11661630	3143
	TESTI20039140	1505	731530	3144
	TESTI20039980	1506	2514	3145
	TESTI20040000	1507	291881	3146
25	TESTI20040310	1508	1261463	3147
	TESTI20041110	1509	143502	3148
	TESTI20041220	1510	33 1703	3149
	TESTI20042070	1511	951903	3150
	TESTI20042290	1512	647 1711	3151
30	TESTI20042430	1513	12271535	3152
	TESTI20042870	1514	16972263	3153
	TESTI20042950	1515	1871887	3154
	TESTI20047120	1516	1121002	3155
35	TESTI20049290	1517	4021226	3156
30	TESTI20049820	1518	1571875	3157
	TESTI20049940	1519	50550	3158
	TESTI20051550	1520	79501	3159
	TESTI20052680	1521	601247	3160
40	TESTI20053960	1522	4022522	3161
	TESTI20054080	1523	108929	3162
	TESTI20054920	1524	137568	3163
	TESTI20055840	1525	2101214	3164
45	TESTI20056900	1526	1241788	3165
45	TESTI20057310	1527	287>1853	3166
	TESTI20057420	1528	1641636	3167
ļ	TESTI20058600	1529	4301167	3168
İ	TESTI20062380	1530	7191567	3169
50	TESTI20062550	1531	511837	3170
	TESTI20064250	1532	5371436	3171
	TESTI20064830	1533	3731614	3172
	TESTI20065720	1534	222644	3173
	TESTI20067740	1535	3821239	3174
55	TESTI20068660	1536	871337	3175
	TESTI20068720	1537	3781331	3176
	TESTI20069780	1538	310639	3177
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Table 1 (continued)

		Table 1 (Continued)		
	Clone name	SEQ ID NO. of nucleotide sequence	Position of CDS	SEQ ID NO. of amino acid sequence
-	TEST120069790	1539	- 8871189	3178
5	TESTI20071830	1540	3521176	3179
	TESTI20073580	1541	31394	3180
	TESTI20074020	1542	10971426	3181
10	TESTI20074640	1543	204>1824	3182
	TESTI20074660	1544	1241683	3183
	TESTI20074800	1545	812000	3184
	TESTI20074000	1546	122>2107	3185
	TESTI20077490	1547	8521598	3186
	TESTI20077500	1548	3911722	3187
15	TESTI20078140	1549	8971400	3188
	TESTI20078640	1550	287802	3189
	TESTI20078670	1551	3181952	3190
	TESTI20078720	1552	921309	3191
20	TESTI20070720	1553	8243025	3192
	TESTI20079310	1554	1532429	3193
	TESTI20080200	1555	72497	3194
	TESTI20080330	1556	1181839	3195
	TESTI20081390	1557	147545	3196
25	TESTI20081440	1558	9311419	3197
	TESTI20082340	1559	409834	3198
	TESTI20082400	1560	1572979	3199
	TESTI20083430	1561	31552	3200
30	TESTI20083670	1562	17492078	3200
	TESTI20084400	1563	2461289	3202
	TESTI20080370	1564	141900	3202
	TESTI20087740	1565	362757	3204
	TESTI20136910	1566	16672026	3205
35	TESTI20138320	1567	981060	3206
	TESTI20140360	1568	8311349	3207
	TESTI20177400	1569	701584	3208
	TESTI30000020	1570	971914	3209
40	THYMU10000020	1571	2861131	3210
,,,	THYMU10000320	1572	12991691	3211
	THYMU10000830	1573	11691936	3212
	THYMU10000050	1574	632934	3213
	THYMU10001760	1575	1492	3214
45	THYMU10002910	1576	15982026	3215
	THYMU10003290	1577	22534	3216
	THYMU10003590	1578	7432005	3217
50	THYMU10003660	1579	17492084	3218
	THYMU10003820	1580	12421601	3219
	THYMU10004590	1581	5941142	3220
	THYMU10004730	1582	421735	3221
55	THYMU10004910	1583	3011119	3222
	THYMU10005270	1584	1706>2057	3223
	THYMU10005580	1585	8961819	3224
	THYMU20001400	1586	42410	3225
	THYMU20002360	1587	2385	3226
Į		1007		5220

Table 1 (continued)

	Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	Cione name	sequence	Position of CDS	sequence
5	THYMU20003170	1588	7031041	3227
	THYMU20003690	1589	3281782	3228
	TRACH10000180	1590	631205	3229
	TRACH10000300	1591	384902	3230
	TRACH10000570	1592	7221039	3231
	TRACH10000630	1593	4311372	3232
	TRACH10000740	1594	801672	3233
	TRACH10001000	1595	181660	3234
	TRACH10001060	1596	7441121	3235
15	TRACH10001250	1597	211610	3236
13	TRACH10001400	1598	266622	3237
	TRACH20000150	1599	13031755	3238
	TRACH20000790	1600	47385	3239
	TRACH20001850	1601	19750	3240
20	TRACH20001960	1602	144974	3241
	TRACH20002350	1603	11231437	3242
	TRACH20002370	1604	1971471	3243
	TRACH20002500	1605	1201682	3244
25	TRACH20002890	1606	8952022	3245
20	TRACH20003930	1607	1403>2562	3246
	TRACH20004110	1608	1501844	3247
	TRACH20004200	1609	80>2895	3248
	TRACH20004610	1610	4982084	3249
30	TRACH20004720	1611	4351940	3250
	TRACH20004960	1612	1151842	3251
	TRACH20004970	1613	10831517	3252
	TRACH20006650	1614	2081866	3253
35	TRACH20006750	1615	2321200	3254
	TRACH20007670	1616	11471452	3255
	TRACH20007800	1617	4921937	3256
	TRACH20008940	1618	7011957	3257
	TRACH20008980	1619	350661	3258
40	TRACH20009260	1620	75770	3259
	TRACH20009440	1621	8791235	3260
	TRACH20011920	1622	530>2034	3261
	TRACH20012890	1623	143715	3262
45	TRACH20013950	1624	16972602	3263
	TRACH20014000	1625	16261949	3264
	TRACH20015920	1626	569877	3265
50	TRACH20016070	1627	4841176	3266
	UMVEN10001220	1628	6981339	3267
	UMVEN20001330	1629	1642242	3268
	UTERU10000770 UTERU10000960	1630	20742418	3269
55	UTERU1000960 UTERU10001600	1631 1632	9521593 5271747	3270
	UTERU10001800	1633	112474	3271 3272
	UTERU20000470	1634	1691>2197	3273
	UTERU20003380	1635	130816.	3273
	UTERU20003930	1636	514 1101	3275
Į	01L1020003300	1030	UIT 11U1	J21 J

Table 1 (continued)

Clone name	SEQ ID NO. of nucleotide	Position of CDS	SEQ ID NO. of amino acid
	sequence		sequence
UTERU20004850	1637	385732	3276
UTERU20005410	1638	432800	3277
UTERU20005690	1639	2171899	3278

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[0028] Namely, primers used to synthesize polynucleotides can be designed based on the nucleotide sequences of polynucleotides of the present invention shown in SEQ ID NOs in the above Table 1. When one intends to synthesize full-length cDNAs, an oligo dT primer can be used as the 3'-end primer. The length of the primers is usually 15-100 bp, and favorably between 15-35 bp. In case of LA PCR, which is described below, the primer length of 25-35 bp may provide a good result.

[0029] A method to design a primer that enables a specific amplification based on the aimed nucleotide sequence is known to those skilled in the art (Current Protocols in Molecular Biology, Ausubel et al. edit, (1987) John Wiley & Sons, Section 6.1-6.4). In designing a primer based on the 5'-end sequence, the primer is designed so as that, in principle, the amplification products will include the translation start site. Accordingly, for example, when the 5'-end primer is designed based on the nucleotide sequence of 5' untranslated region (5'UTR), any part of the 5'-end, which ensures the specificity to the cDNA of interest, can be selected as the primer.

[0030] When synthesizing a full-length cDNA, the target nucleotide sequence to be amplified can extend to several thousand bp in some cDNA. However, it is possible to amplify such a long nucleotides by using such as LA PCR (Long and Accurate PCR). It is advantageous to use LA PCR when synthesizing long DNA. In LA PCR, in which a special DNA polymerase having 3'-> 5' exonuclease activity is used, misincorporated nucleotides can be removed. Accordingly, accurate synthesis of the complementary strand can be achieved even with a long nucleotide sequence. By using LA PCR, it is reported that amplification of a nucleotide with 20 kb longer can be achieved under desirable conditions (Takeshi Hayashi (1996) Jikken-Igaku Bessatsu, "Advanced Technologies in PCR" Youdo-sha).

[0031] A template DNA for synthesizing the full-length cDNA of the present invention can be obtained by using cDNA libraries that are prepared by various methods. The full-length cDNA clones of the present invention are clones with high probability of completeness in length, which were obtained by the method comprising the steps of [1] preparing libraries containing cDNAs with the very high fullness ratio by oligo-capping, and [2] assembling the 5'-end sequences and selecting one with the highest probability of completeness in length in the cluster formed (there are many clones longer in the 5'-end direction).

[0032] However, the uses of primers designed based on the full-length nucleotide sequences provided by the present invention enable easily obtaining full-length cDNAs without such a special technique.

[0033] The problem with the cDNA libraries prepared by the known methods or commercially available is that mRNA contained in the libraries has very low fullness ratio. Thus, it is difficult to screen full-length cDNA clone directly from the library using ordinary cloning methods. The present invention has revealed a nucleotide sequence of novel full-length cDNA. If a full-length nucleotide sequence is provided, it is possible to synthesize a target full-length cDNA by using enzymatic reactions such as PCR. In particular, a full-length-enriched cDNA library, synthesized by methods such as oligo-capping, is desirable to synthesize a full-length cDNA with more reliability.

[0034] The 5'-end sequence of the full-length cDNA clones of the invention can be used to isolate the regulatory element of transcription including the promoter on the genome. A rough draft of the human genome (analysis of human genomic sequence with lower accuracy), which covers 90% of the genome, has been reported (Nature, Vol.409, 814-823, 2001), and by the year 2003, analysis of the entire human genomic sequence is going to be finished. However, it is hard to analyze with software the transcription start sites on the human genome, in which long introns exist. By contrast, it is easy to specify the transcription start site on the genomic sequence using the nucleotide sequence which includes the 5'-end of the full-length cDNA clone of the present invention, and thus it is easy to obtain the genomic region involved in transcription regulation, which includes the promoter that is contained in the upstream of the transcription start site.

[0035] The polypeptide encoded by the full-length cDNA of the invention can be prepared as a recombinant polypeptide or as a natural polypeptide. For example, the recombinant polypeptide can be prepared by inserting the polynucleotide encoding the polypeptide of the invention into a vector, introducing the vector into an appropriate host cell and purifying the polypeptide expressed within the transformed host cell, as described below. In contrast, the natural polypeptide can be prepared, for example, by utilizing an affinity column to which an antibody against the polypeptide of the invention (Current Protocols in Molecular Biology (1987) Ausubel et al. edit, John Wiley & Sons, Section 16.1-16.19) is attached. The antibody used for affinity purification may be either a polyclonal antibody, or a monoclonal antibody. Alternatively, *in vitro* translation (See, for example, "On the fidelity of mRNA translation in the nuclease-treated

rabbit reticulocyte lysate system." Dasso M.C., and Jackson R.J. (1989) Nucleic Acids Res. 17: 3129-3144) may be used for preparing the polypeptide of the invention.

[0036] Polypeptides functionally equivalent to the polypeptides of the present invention can be prepared based on the activities, which were clarified in the above-mentioned manner, of the polypeptides of the present invention. Using the biological activity possessed by the polypeptide of the invention as an index, it is possible to verify whether or not a particular polypeptide is functionally equivalent to the polypeptide of the invention by examining whether or not the polypeptide has said activity.

[0037] Polypeptides functionally equivalent to the polypeptides of the present invention can be prepared by those skilled in the art, for example, by using a method for introducing mutations into an amino acid sequence of a polypeptide (for example, site-directed mutagenesis (Current Protocols in Molecular Biology, edit, Ausubel et al., (1987) John Wiley & Sons, Section 8.1-8.5). Besides, such polypeptides can be generated by spontaneous mutations. The present invention also includes a polypeptide comprising the amino acid sequence shown in Table 1 in which one or more amino acids are substituted, deleted, inserted, and/or added, as long as the polypeptides have the equivalent functions to those of the polypeptides identified in the present Examples described later.

[0038] There are no limitations on the number and sites of amino acid mutations, as long as the polypeptides maintain the functions thereof. The number of mutations typically corresponds to 30% or less, or 20% or less, or 10% or less, preferably 5% or less, or 3% or less of the total amino acids, more preferably 2% or less or 1% or less of the total amino acids. Alternatively, herein, substitution of one or more amino acids includes substitution of several amino acids. As used herein, the term "several amino acids" means, for example, 5 amino acids, preferably 4 or 3 amino acids, more preferably 2 amino acids, and further preferably 1 amino acid.

[0039] From the viewpoint of maintaining the polypeptide function, it is preferable that a substituted amino acid has a similar property to that of the original amino acid. For example, Ala, Val, Leu, Ile, Pro, Met, Phe and Trp are assumed to have similar properties to one another because they are all classified into a group of non-polar amino acids. Similarly, substitution can be performed among non-charged amino acid such as Gly, Ser, Thr, Cys, Tyr, Asn, and Gin, acidic amino acids such as Asp and Glu, and basic amino acids such as Lys, Arg, and His.

[0040] In addition, polypeptides functionally equivalent to the polypeptides of the present invention can be isolated by using techniques of hybridization or gene amplification known to those skilled in the art. Specifically, using the hybridization technique (Current Protocols in Molecular Biology, edit, Ausubel et al., (1987) John Wiley & Sons, Section 6.3-6.4)), those skilled in the art can usually isolate a polynucleotide highly homologous to the polynucleotide encoding the polypeptide identified in the present Example based on the identified nucleotide sequence (Table 1) or a portion thereof and obtain the functionally equivalent polypeptide from the isolated polynucleotide. The present invention include polypeptides encoded by the polynucleotides hybridizing with the polynucleotides encoding the polypeptides identified in the present Example, as long as the polypeptides are functionally equivalent to the polypeptides identified in the present Example. Organisms from which the functionally equivalent polypeptides are isolated are illustrated by vertebrates such as human, mouse, rat, rabbit, pig and bovine, but are not limited to these animals.

[0041] Washing conditions of hybridization for the isolation of polynucleotides encoding the functionally equivalent polypeptides are usually "1x SSC, 0.1% SDS, 37°C"; more stringent conditions are "0.5x SSC, 0.1% SDS, 42°C"; and still more stringent conditions are "0.1x SSC, 0.1% SDS, 65°C". Alternatively, the following conditions can be given as hybridization conditions of the present invention. Namely, conditions in which the hybridization is done at "6x SSC, 40% Formamide, 25°C", and the washing at "1x SSC, 55°C" can be given. More preferable conditions are those in which the hybridization is done at "6x SSC, 40% Formamide, 37°C", and the washing at "0.2x SSC, 55°C". Even more preferable are those in which the hybridization is done at "6x SSC, 50% Formamide, 37°C", and the washing at "0.1x SSC, 62°C". The more stringent the conditions of hybridization are, the more frequently the polynucleotides highly homologous to the probe sequence are isolated. Therefore, it is preferable to conduct hybridization under stringent conditions. Examples of stringent conditions in the present invention are, washing conditions of "0.5x SSC, 0.1% SDS, 42°C", or alternatively, hybridization conditions of "6x SSC, 40% Formamide, 37°C, and the washing at "0.2x SSC, 55°C".

[0042] One skilled in the art can suitably select various conditions, such as dilution ratios of SSC, formamide concentrations, and temperatures to accomplish a similar stringency.

[0043] However, the above-mentioned combinations of SSC, SDS and temperature conditions are indicated just as examples. Those skilled in the art can select the hybridization conditions with similar stringency to those mentioned above by properly combining the above-mentioned or other factors (for example, probe concentration, probe length and duration of hybridization reaction) that determines the stringency of hybridization.

[0044] The amino acid sequences of polypeptides isolated by using the hybridization techniques usually have high identity to those of the polypeptides of the present invention, which are shown in Table 1. The present invention encompasses a polynucleotide comprising a nucleotide sequence that has a high identity to the nucleotide sequence of claim 1 (a). Furthermore, the present invention encompasses a peptide, or polypeptide comprising an amino acid sequence that has a high identity to the amino acid sequence encoded by the polynucleotide of claim 1 (b). The term

"high identity" indicates sequence identity of at least 40% or more; preferably 60% or more; and more preferably 70% or more. Alternatively, more preferable is identity of 90% or more, or 93% or more, or 95% or more, furthermore, 97% or more, or 99% or more. The identity can be determined by using the BLAST search algorithm.

[0045] As used herein, "percent identity" of amino acid sequences or nucleic acids is determined using the algorithm BLAST of Karlin and Altschul (Proc. Natl. Acad. Sci. USA 90:5873-5877, 1993). Such an algorithm is incorporated into the BLASTN and BLASTX programs of Altschul et al. (J. Mol. Biol.215:403-410, 1990). BLAST nucleotide searches are performed with the BLASTN program, for example, score = 100, wordlength = 12. BLAST protein searches are performed with the BLASTX program, for example, score = 50, wordlength = 3. When utilizing BLAST and Gapped BLAST programs, the default parameters of the respective programs are used. See http://www.ncbi.nlm.nih.gov.

[0046] With the gene amplification technique (PCR) (Current Protocols in Molecular Biology, edit, Ausubel et al., (1987) John Wiley & Sons, Section 6.1-6.4)) using primers designed based on the nucleotide sequence (Table 1) or a portion thereof identified in the present Example, it is possible to isolate a polynucleotide fragment highly homologous to the polynucleotide sequence or a portion thereof and to obtain functionally equivalent polypeptide to a particular polypeptide identified in the present Example based on the isolated polynucleotide fragment.

[0047] The present invention also provides a polynucleotide containing at least 15 nucleotides complementary to a polynucleotide comprising a nucleotide sequence of SEQ ID NOs shown in Table 1 or the complementary strand thereof. Herein, the term "complementary strand" is defined as one strand of a double strand DNA composed of A:T and G:C base pair to the other strand. Also, "complementary" is defined as not only those completely matching within a continuous region of at least 15 nucleotides, but also having a identity of at least 70%, favorably 80% or higher, more favorably 90% or higher, and most favorably 95% or higher within that region. The identity may be determined using the algorithm described herein.

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[0048] Such a polynucleotide includes probes and primers used for the detection and amplification of a polynucleotide encoding the inventive polypeptide. When used as a primer, the polynucleotide usually comprises 15 to 100 bp, and preferably of 15 to 35 bp. When used as a probe, the polynucleotide comprises the whole or a part of the sequence of a polynucleotide of the invention, and comprises at least 15 bp. When used as primers, such polynucleotides are complementary at the 3'-end, and restriction enzyme recognition sequences or tags can be added to the 5'-end.

[0049] Furthermore, polynucleotides of the present invention include an antisense polynucleotide for suppressing the expression of a polypeptide of the invention, which comprises an amino acid sequence of SEQ ID NOs shown in Table 1. To exert an antisense effect, an antisense polynucleotide has at least 15 bp or more, for example 50 bp or more, preferably 100 bp or more, and more preferably 500 bp or more, and usually has 3000 bp or less, and preferably 2000 bp or less. Antisense polynucleotides can be used in the gene therapy of diseases caused by abnormalities of the polypeptides of the invention (abnormal function or abnormal expression). An antisense polynucleotide can be prepared, for example, by the phosphorothicate method ("Physicochemical properties of phosphorothicate oligodeoxynucleotides." Stein (1988) Nucleic Acids Res. 16: 3209-3221) based on the sequence information of polynucleotide encoding a polypeptide of the invention (for example, the nucleotide sequences of SEQ ID NO: 1 to 1639).

[0050] The polynucleotides or antisense polynucleotides of the present invention can be used in, for example, gene therapy. As target diseases, for example, cancers or various inflammatory diseases may be preferable. These molecules can be used for gene therapy, for example, by administrating them to patients by the *in vivo* or *ex vivo* method using virus vectors such as retrovirus vectors, adenovirus vectors, and adeno-related virus vectors, or non-virus vectors such as liposomes.

[0051] The present invention also includes a partial peptide of the polypeptides of the invention. The partial peptide comprises a polypeptide generated as a result that a signal peptide has been removed from a secretory protein. If the polypeptide of the present invention has an activity as a receptor or a ligand, the partial peptide may function as a competitive inhibitor of the polypeptide and may bind to the receptor (or ligand). In addition, the present invention includes an antigen peptide for raising antibodies. For the peptides to be specific for the polypeptide of the invention, the peptides comprise at least 7 amino acids, preferably 8 amino acids or more, more preferably 9 amino acids or more, and even more preferably 10 amino acids or more. The peptide can be used for preparing antibodies against the polypeptide of the invention, or competitive inhibitors of them, and also screening for a receptor that binds to the polypeptide of the invention. The partial peptides of the invention can be produced, for example, by genetic engineering methods, known methods for synthesizing peptides, or digesting the polypeptide of the invention with an appropriate peptidase.

[0052] The present invention also relates to a vector into which a polynucleotide of the invention is inserted. The vector of the invention is not limited as long as it contains the inserted polynucleotide stably. For example, if *E. coli* is used as a host, vectors such as pBluescript vector (Stratagene) are preferable as a cloning vector. To produce the polypeptide of the invention, expression vectors are especially useful. Any expression vector can be used as long as it is capable of expressing the polypeptide *in vitro*, in *E. coli*, in cultured cells, or *in vivo*. For example, pBEST vector (Promega) is preferable for *in vitro* expression, pET vector (Invitrogen) for *E. coli*, pME18S-FL3 vector (GenBank Accession No. AB009864) for cultured cells, and pME18S vector (Mol. Cell. Biol. (1988) 8: 466-472) for *in vivo* expression.

To insert the polynucleotide of the invention, ligation utilizing restriction sites can be performed according to the standard method (Current Protocols in Molecular Biology (1987) Ausubel et al. edit, John Wiley & Sons, Section 11.4-11.11). [0053] Recently, the technique of GATEWAY™ system (Invitrogen), which is an expression vector construction system for polypeptide expression, has been developed (Experimental Medicine, Vol. 18, No. 19 (December), p2716-2717, 2000). This system includes two types of site-specific recombinases (BP CLONASE™ and LR CLONASE™) derived from lambda phage and uses BP CLONASE™-specific recombination sites for an Entry Vector and LR CLONASE™-specific recombination sites for a Destination Vector, which may comprise a tag useful for polypeptide purification. With this system, an expression vector can be obtained by using homologous recombination.

[0054] 'First, a polynucleotide fragment of interest is inserted into the entry vector using the first recombination. Then, the secondary recombination is allowed to take place between the entry vector, where the polynucleotide fragment of interest has been inserted, and the destination vector. Thus, the expression vector can be prepared rapidly and highly efficiently. With the above-mentioned typical method using restriction enzyme and ligase reactions, the step of expression vector construction and expression of polypeptide of interest takes about 7 to 10 days. However, with the GATE-WAY<sup>TM</sup> system, the polypeptide of interest can be expressed and prepared in only 3 to 4 days. Thus, the system ensures a high-throughput functional analysis for expressed polypeptides (http://biotech.nikkeibp.co.jp/netlink/lto/gate-way/).

[0055] The present invention also relates to a transformant carrying the vector of the invention. Any cell can be used as a host into which the vector of the invention is inserted, and various kinds of host cells can be used depending on the purposes. For strong expression of the polypeptide in eukaryotic cells, COS cells or CHO cells can be used, for example.

[0056] Introduction of the vector into host cells can be performed, for example, by calcium phosphate precipitation method, electroporation method (Current Protocols in Molecular Biology (1987) Ausubel et al. edit, John Wiley & Sons, Section 9.1-9.9), lipofectamine method (GIBCO-BRL), or microinjection method, etc.

[0057] Further, a polynucleotide containing at least 15 nucleotides comprising a nucleotide sequence of any one of the polynucleotides comprising the nucleotide sequences of SEQ ID NOs shown in Table 1 or the complementary strand thereof can be used not only as a primer for synthesizing full-length cDNAs but also for testing and diagnosing the abnormalities of the polypeptide encoded by the full-length cDNA of the present invention. For example, by utilizing polymerase chain reaction (genomic DNA-PCR, or RT-PCR) using the polynucleotide of the invention as a primer, polynucleotide encoding the polypeptide of the invention can be amplified. It is also possible to obtain the regulatory region of expression in the 5'-upstream by using PCR or hybridization since the transcription start site within the genomic sequence can be easily specified based on the 5'-end sequence of the full-length cDNA. The obtained genomic region can be used for detection and/or diagnosis of the abnormality of the sequence by RFLP analysis, SSCP, or sequencing. Especially, in the case where expression of the mRNA of the present invention varies according to a specific disease, analysis of the amount of expression of the mRNA using the polynucleotide of the present invention as a probe or a primer enables detection and diagnosis of the disease.

[0058] The present invention also relates to antibodies that bind to the polypeptide of the invention. There are no limitations in the form of the antibodies of the invention. They include polyclonal antibodies, monoclonal antibodies, or their portions that can bind to an antigen. They also include antibodies of all classes. Furthermore, special antibodies such as humanized antibodies and chimeric antibodies are also included.

[0059] The polyclonal antibody of the invention can be obtained according to the standard method by synthesizing an oligopeptide corresponding to the amino acid sequence and immunizing rabbits with the peptide (Current Protocols in Molecular Biology (1987) Ausubel et al. edit, John Wiley & Sons, Section 11.12-11.13). The monoclonal antibody of the invention can be obtained according to the standard method by purifying the polypeptide expressed in *E. coli*, immunizing mice with the polypeptide, and producing a hybridoma cell by fusing the spleen cells and myeloma cells (Current Protocols in Molecular Biology (1987) Ausubel et al. edit, John Wiley & Sons, Section 11.4-11.11).

[0060] The antibody binding to the polypeptide of the present invention can be used for purification of the polypeptide of the invention, and also for detection and/or diagnosis of the abnormalities of the expression and structure of the polypeptide. Specifically, polypeptides can be extracted, for example, from tissues, blood, or cells, and the polypeptide of the invention is detected by Western blotting, immunoprecipitation, or ELISA, etc. for the above purpose.

[0061] Furthermore, the antibody binding to the polypeptide of the present invention can be utilized for treating the diseases that associates with the polypeptide of the invention. If the antibodies are used for treating patients, human antibodies, humanized antibodies, or chimeric antibodies are preferable in terms of their low antigenicity. The human antibodies can be prepared by immunizing a mouse whose immune system is replaced with that of human (e.g., see "Functional transplant of megabase human immunoglobulin loci recapitulates human antibody response in mice" Mendez, M.J. et al. (1997) Nat. Genet. 15: 146-156). The humanized antibodies can be prepared by recombination of the hypervariable region of a monoclonal antibody (Methods in Enzymology (1991) 203: 99-121).

[0062] The use of the amino acid sequences of the polypeptides encoded by the cDNAs of the present invention enables predicting that the polypeptides have the following functions. It can be predict, from the results of homology

search of SwissProt, GenBank, UniGene, or nr, that these polypeptides have such functions. Specifically, for instance, as shown in Examples, searching for a known gene or polypeptide that is homologous to the partial sequence of the full-length cDNA of the invention (1639 clone) and referring the function of the gene and of the polypeptide encoded by the gene make it possible to predict the function of the polypeptide encoded by the cDNA of the invention. In this way, each of 892 clones out of the 1639 full-length cDNA clones of the invention was predicted to encode a polypeptide that was classified into the following categories.

Secretory and/or membrane protein (439 clones) Glycoprotein-related protein (87 clones) 10 Signal transduction-related protein (46 clones) Transcription-related protein (140 clones) Disease-related protein (219 clones) Enzyme and/or metabolism-related protein (168 clones) Cell division- and/or cell proliferation-related protein (23 clones) 15 Cytoskeleton-related protein (60 clones) Nuclear protein and/or RNA synthesis-related protein (59 clones) Protein synthesis- and/or transport-related protein (24 clones) Cellular defense-related protein (6 clones) Development and/or differentiation-related protein (19 clones) 20 DNA- and/or RNA-binding protein (158 clones)

ATP- and/or GTP-binding protein (63 clones)

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[0063] The functions of the polypeptides encoded by the cDNAs of the present invention can be predicted by assessing the presence of signal sequence, transmembrane region, nuclear translocation signal, glycosylation signal, phosphorylation site, and zinc finger motif, SH3 domain, etc. in the amino acid sequences. The programs, PSORT (Nakai K., and Kanehisa M. (1992) Genomics 14: 897-911), SOSUI (Hirokawa T. et al. (1998) Bioinformatics 14: 378-379) (Mitsui Knowledge Industry), and MEMSAT (Jones D.T., Taylor W.R., and Thornton J.M. (1994) Biochemistry 33: 3038-3049) can be used to predict the existence of the signal sequence or transmembrane region. Alternatively, a partial amino acid sequence of the polypeptide is fused with another polypeptide such as GFP, the fusion polypeptide is transfected into cultured cells, and the localization is analyzed to predict the function of the original polypeptide.

[0064] Based on the determined nucleotide sequences of the full-length cDNAs obtained in the present invention, it is possible to predict more detailed functions of the polypeptides encoded by the cDNA clones, for example, by searching the databases such as GenBank, Swiss-Prot, UniGene, and nr for homologies of the cDNAs; or by searching the amino acid sequences deduced from the full-length cDNAs for signal sequences by using software programs such as PSORT, for transmembrane regions by using software programs such as SOSUI or for motifs by using software programs such as Pfam (http://www.sanger.ac.uk/Software/Pfam/index.shtml) and PROSITE (http://www.expasy.ch/prosite/). As a matter of course, the functions are often predictable by using partial sequence information (preferably 300 nucleotides or more) instead of the full-length nucleotide sequences. However, the result of the prediction by using partial nucleotide sequence does not always agree with the result obtained by using full-length nucleotide sequence, and thus, it is needless to say that the prediction of function is preferably performed based on the full-length nucleotide sequences.

[0065] GenBank, Swiss-Prot, UniGene and nr databases were searched for homologies of the full-length nucleotide sequences of the 1639 clones (see Example 6). The amino acid sequences deduced from the full-length nucleotide sequences were searched for functional domains by PSORT, SOSUI and Pfam. Prediction of functions of polypeptides encoded by the clones and the categorization thereof were performed based on these results obtained. The categorization was carried out by the following method.

[1] Firstly, the cDNA clones were classified into the above-mentioned 14 functional categories based on the results of annotation-based categorization (using the keywords in the case of Swiss-Prot hit data; using Definition or Reference information in the case of GenBank, UniGene, or nr hit data), and the signal sequence search of the deduced ORFs by PSORT and the transmembrane region search by SOSUI.

[2] Secondly, clones which had been unassignable to the categories by the method of [1] were searched for functional domains and/or motifs by Pfam. Based on the results, the clones were additionally classified into the above-mentioned 14 types of categories when they had a functional domain and/or motif assignable to any one of the categories.

[0066] The following 439 clones presumably belong to secretory and/or membrane proteins. 3NB6910000180, 3NB6910000850, 3NB6920000290, 3NB6920003300, 3NB6920005450, 3NB6920010020,

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ADRGL10000180, ADRGL10001600, ADRGL20003230, BGGI120010970, BNGH410000340, BNGH410001040,
BNGH410001180, BNGH410001370, BNGH410001980, BRACE10000730, BRACE10001690, BRACE20002800,
BRACE20007180, BRACE20010650, BRACE20011170, BRACE20011430, BRACE20013400, BRACE20013520,
BRACE20014230, BRACE20014530, BRACE20014920, BRACE20015080, BRACE20018590, BRACE20022270,
BRACE20024680, BRACE20026350, BRACE20026850, BRACE20030780, BRACE20031100, BRACE20034490,
BRACE20071380, BRACE20071970, BRACE20072810, BRACE20074010, BRACE20074470, BRACE20075020,
BRACE20075380, BRACE20076410, BRACE20076630, BRACE20076850, BRACE20077610, BRACE20077640,
BRACE20077980, BRACE20078680, BRACE20079530, BRACE20084430, BRACE20086550, BRACE20089600,
BRACE20091880, BRAWH10000010, BRAWH10000370, BRAWH10000940, BRAWH10001620, BRAWH10001800,
BRAWH20001090, BRAWH20004430, BRAWH20006970, BRAWH20009840, BRAWH20011290, BRAWH20011410,
BRAWH20011660, BRAWH20014380, BRAWH20014840, BRAWH20015030, BRAWH20036930, BRAWH20038320,
BRAWH20040950, BRAWH20052250, BRAWH20059980, BRAWH20087060, BRAWH20092610, CD34C20000510,
CTONG20013660, CTONG20015330, CTONG20028160, CTONG20037820, CTONG20047160, DFNES20003350,
FCBBF10006180, FCBBF10006750, FCBBF20005910, FCBBF20007330, FCBBF20008150, FCBBF200094
FCBBF20015380, FEBRA20003780, FEBRA20004040, FEBRA20004150, FEBRA20004520, FEBRA20004910,
FEBRA20006560, FEBRA20006900, FEBRA20007330, FEBRA20008090, FEBRA20008800, FEBRA20010930,
FEBRA20012270, FEBRA20012450, FEBRA20012940, FEBRA20013510, FEBRA20014870, FEBRA20014920,
FEBRA20015840, FEBRA20020860, FEBRA20021910, FEBRA20025250, FEBRA20031550, FEBRA20037070.
FEBRA20041100, FEBRA20041910, FEBRA20057780, FEBRA20063150, FEBRA20066670, FEBRA20067930,
HCASM10000610, HCASM20002020, HEART20000990, HEART20004920, HHDPC20000950, HLUNG10000240,
HLUNG10000370, HLUNG10001100, HLUNG20001160, HLUNG20001250, HLUNG20001420, HLUNG20001760,
HLUNG20002550, HSYRA20003470, HSYRA20006290, HSYRA20008280, HSYRA20011030, HSYRA20013320,
HSYRA20014200, HSYRA20015800, IMR3210000440, IMR3210001580, IMR3210002660, IMR3220007750,
IMR3220008590, IMR3220009840, IMR3220014350, KIDNE10000080, KIDNE10001040, KIDNE10001430,
KIDNE20000700, KIDNE20000850, KIDNE200016 KIDNE20003150, KIDNE200033 KIDNE20003490,
KIDNE20004220, KIDNE20005170, KIDNE20005190, KIDNE20033050, KIDNE20033570, KIDNE20039410,
KIDNE20042620, KIDNE20042950, KIDNE20044110, KIDNE20048280, KIDNE20049810, KIDNE20054000,
KIDNE20054770, KIDNE20060530, KIDNE20060620, KIDNE20063530, KIDNE20063760, KIDNE20066520,
KIDNE20067600, KIDNE20071860, KIDNE20073520, KIDNE20074220, KIDNE20075690, LIVER10000580,
LIVER1000670, LIVER10001040, LIVER10001110, LIVER10001750, LIVER10005420, LIVER20004160,
MAMGL10000320, MAMGL10001840, MESAN10000350, MESAN10001470, MESAN10001800, MESAN20001490,
NB9N420000420, NHNPC20002060, NT2NE10000230, NT2NE10000830, NT2NE10001630, NT2NE20003270,
NT2NE20003920, NT2NE20004550, NT2NE20004700, NT2NE20005500, NT2NE20012470, NT2NE20014350,
NT2NE20016260, NT2NE20034080, NT2NE20047160, NT2NE20055170, NT2NE20057200, NT2RI20005970,
NT2RI20009740, NT2RI20010100, NT2RI20014490, NT2RI20015400, NT2RI20015950, NT2RI20016570,
NT2RI20018660, NT2RI20020220, NT2RI20021520, NT2RI20022430, NT2RI20022520, NT2RI20025300,
NT2RI20030110, NT2RI20030510, NT2RI20031540, NT2RI20033010, NT2RI20033830, NT2RI20036780,
NT2RI20042840, NT2RI20044420, NT2RI20049850, NT2RI20050870, NT2RI20051500, NT2RI20066820,
NT2RI20068250, NT2RI20070480, NT2RI20070840, NT2RI20073030, NT2RI20074980, NT2RI20077540,
NT2RI20078270, NT2RI20080500, NT2RI20081880, NT2RI20084810, NT2RI20085980, NT2RI20089420,
NT2RI20092890, NT2RI20094060, NT2RP60000320, NT2RP60000390, NT2RP60001090, NT2RP70000690,
NT2RP70002380, NT2RP70002590, NT2RP70003640, NT2RP70011660, NT2RP70015910, NT2RP70021510,
NT2RP70023760, NT2RP70023790, NT2RP70026190, NT2RP70029820, NT2RP70040800, NT2RP70043730,
NT2RP70047900, NT2RP70049250, NT2RP70055200, NT2RP70064080, NT2RP70071540, NT2RP70071770,
NT2RP70073810, NT2RP70074220, NT2RP70075040, NT2RP70076170, NT2RP70079250, NT2RP70079750,
NT2RP70081330, NT2RP70081370, NT2RP70083150, NT2RP70085500, NT2RP70090120, NT2RP70091490,
NT2RP70091680, NT2RP70092360, NT2RP70093220, NT2RP70093730, NT2RP70094290, NT2RP70094810.
NT2RP70094980, NT2RP70095070, NTONG10000980, NTONG10002140, NTONG10002570, NTONG20002650.
NTONG20004920, NTONG20008000, NTONG20012220, OCBBF10000420, OCBBF20002310, OCBBF20009980,
OCBBF20012100, PANCR10000210, PLACE50000670, PLACE50000680, PLACE50001050, PLACE50001130,
PLACE60012810, PLACE60018860, PLACE60020160, PLACE60020840, PLACE60026990, PLACE60037050,
PLACE60037450, PLACE60043960, PLACE60044540, PLACE60047380, PLACE60049930, PLACE60050290,
PROST10002200, PROST10002720, PROST10005260, PROST10005360, PROST20000360, PROST20026820.
PROST20029600, PROST20032320, PROST20033020, PROST20039220, PROST20044160, PROST20051430,
PROST20054260, PROST20058800, PROST20059190, PROST20059430, PROST20069880, PROST20072370.
PROST20073890, PUAEN10000570, PUAEN10003220, SALGL10001570, SKMUS20007740, SKNMC10000190,
SKNMC10000290, SKNMC10002290, SKNMC10002510, SKNMC20011130, SKNMC20015030, SMINT10000160.
SMINT10000 SMINT10000570, SMINT10001180, SMINT20000180, SMINT20002770, SPLEN10000910.
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SPLEN20001340, SPLEN20002430, SPLEN20002700, SPLEN20003100, SPLEN20004960, STOMA10000520,
STOMA10001170, STOMA20000320, STOMA20002570, SYNOV20001770, SYNOV20016480, TESTI10000420,
TESTI10000960, TESTI10001270, TESTI10001380, TESTI20001770, TESTI20006000, TESTI20007620, TESTI20008830, TESTI20009900, TESTI20009700, TESTI20011340, TESTI20012370, TESTI20013520, TESTI20016210, TESTI20016710, TESTI20018520, TESTI20018620, TESTI20020200, TESTI20026320, TESTI20026980, TESTI20027000, TESTI20027070, TESTI20026600, TESTI20030370, TESTI20026800, TESTI20026800, TESTI20026800, TESTI20026800, TESTI20026800, TESTI20030370, TESTI20026800, TESTI20030370, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI20030400, TESTI2
TESTI2003193 TESTI20034190, TESTI20036490, TESTI20039980, TESTI20042870, TESTI20047120, TESTI20049940, TESTI20056900, TESTI20057420, TESTI20058600, TESTI20067740, TESTI20069780,
TESTI20074800, TESTI20077490, TESTI20079510, TESTI20080200, TESTI20081440, TESTI20087740,
TESTI20088470, TESTI20136910, THYMU10000830, THYMU10001760, THYMU10003290, THYMU10003820,
THYMU10005580, TRACH10000630, TRACH10001000, TRACH10001400, TRACH20001850, TRACH20001960,
TRACH20004200, TRACH20004960, TRACH20006650, TRACH20007670, TRACH20008980, TRACH20015920,
UMVEN20001330, UTERU10000770, UTERU10000960, UTERU10001920, UTERU20000470, UTERU20003930,
UTERU20004850
[0067] The following 87 clones presumably belong to glycoprotein-related proteins.
BNGH410000340, BNGH410001180, BRACE20014920, BRACE20015080, BRACE20018590, BRACE20024680,
BRACE20026350, BRACE20031100, BRACE20074470, BRAWH10000370, BRAWH20001090, BRAWH20011660,
BRAWH20014840, BRAWH20059980, CD34C20000510, CTONG20013660, CTONG20028160, CTONG20037820,
FCBBF20007330, FEBRA20007330, FEBRA20008800, FEBRA20014920, FEBRA20015840, FEBRA20057780,
HEART20005060, HLUNG10001100, HLUNG20002550, HSYRA20013320, IMR3210002660, IMR3220007750,
IMR3220013320, KIDNE20044110, KIDNE20063760, KIDNE20067600, KIDNE20073520, LIVER20000370,
MESAN10000350, NT2NE10000830, NT2NE10001850, NT2NE20003270, NT2NE20016260, NT2RI20018660,
NT2RI20025300, NT2RI20036780, NT2RI20077540, NT2RI20080500, NT2RI20085980, NT2RI20089420,
NT2RI20092890, NT2RP7000690, NT2RP70004770, NT2RP70055200, NT2RP70081370, NT2RP70083150,
NT2RP70091490, NT2RP70092360, NT2RP70094980, NTONG10002140, OCBBF20002310, OCBBF20002770,
PLACE50000680, PLACE50001130, PLACE60018860, PLACE60044540, PROST20018230, PROST20032320,
PROST20073890, SALGL10001570, SKNMC20015030, SMINT10000160, SMINT20002770, SPLEN20001340,
TESTI10001270, TESTI10001380, TESTI20001770, TESTI20024230, TESTI20027070, TESTI20036490, TESTI20039980, TESTI20056900, TESTI20057420, TESTI20079510, THYMU10001760, TRACH10000740,
TRACH10001250, TRACH20004200, UTERU20000470
[0068] The following 46 clones presumably belong to signal transduction-related proteins.
ADRGL20000740, ASTR010000180, BRACE20005770, BRACE20022020, BRACE20027360, BRACE20027920,
BRAWH20006860, CTONG20005890, FEBRA20000350, HHDPC20000550, IMR3220003020, KIDNE20033730,
KIDNE20040840, KIDNE20053360, KIDNE20062990, NT2RI20033440, NT2RI20058110, NT2RI20062100,
NT2RI20073840, NT2RP70006240, NT2RP70043960, NT2RP70046870, NT2RP70061880, NT2RP70072520,
NT2RP70081440, NT2RP70093700, NTONG10001820, PEBLM20004790, PLACE60026680, PROST20033400,
PROST20043320, SKMUS10000220, SKMUS20016680, SPLEN20003570, TESTI20001540, TESTI20005910,
TESTI20022560, TESTI20024980, TESTI20029120, TESTI20034980, TESTI20049820, TESTI20055840,
THYMU10003590, THYMU20003690, TRACH20002500, TRACH20002890
[0069] The following 140 clones presumably belong to transcription-related proteins.
3NB6920010220, 3NB6920015110, 3NB6920015570, ADRGL10000650, BGGI120006840, BGGI120006930,
BGGI120017140, BNGH410000800, BNGH420005320, BRACE10000930, BRACE20014550, BRACE20018550,
BRACE20020910, BRACE20024090, BRACE20071740, BRAWH10000020, BRAWH10001640, BRAWH10001680.
BRAWH20006330, BRAWH20009010, CTONG20025580, CTONG20028200, FCBBF10005980, FCBBF20000940.
FCBBF20009510, FCBBF50002610, FEBRA20003970, FEBRA20003990, FEBRA20004540, FEBRA20009720.
FEBRA20011460, FEBRA20017150, FEBRA20050140, FEBRA20064760, FEBRA20067360, FEBRA20069420.
FEBRA20072800, HLUNG10000760, HLUNG20000680, HSYRA10001370, HSYRA20016310, IMR3210002420,
IMR3220007420, KIDNE2000510, KIDNE20039940, KIDNE20061490, KIDNE20078110, NESOP10000870,
NHNPC10001240, NHNPC20002120, NT2NE20002590, NT2NE20008090, NT2RI20003410, NT2RI20004120,
NT2RI20004210, NT2RI20010830, NT2RI20018460, NT2RI20025410, NT2RI20025850, NT2RI20060710,
NT2RI20067350, NT2RI20071330, NT2RI20074390, NT2RI20078790, NT2RI20087140, NT2RI20090650,
NT2RI20092150, NT2RP60001000, NT2RP60001270, NT2RP70002710, NT2RP70008120, NT2RP70018560,
NT2RP70024500, NT2RP70032030, NT2RP70036290, NT2RP70042040, NT2RP70045410, NT2RP70046560,
NT2RP70055130, NT2RP70061620, NT2RP70062960, NT2RP70064900, NT2RP70069860, NT2RP70075370.
NT2RP70085570, NT2RP70087200, NT2RP70090190, NTONG20003340, NTONG20003630, NTONG20015500.
OCBBF20011010, OCBBF20011240, OCBBF20015860, PEBLM20002480, PEBLM20002700, PEBLM20003080.
PEBLM20003950, PLACE60002050, PLACE60005550, PLACE60021510, PLACE60030380, PROST20018230.
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PROST20031170, PROST20073170, PUAEN10001610, SALGL10000650, SKMUS10000640, SKMUS20014920, SKNMC2000650. SKNMC20002240. SKNMC20003560. SMINT10001000. SMINT20005450. SPLEN2000200. SPLEN20000720, SYNOV20010140, SYNOV20013740, SYNOV20014510, TESTI10000550, TESTI20001200, TESTI20007070, TESTI20010490, TESTI20015560, TESTI20018150, TESTI20018790, TESTI20021490, TESTI20026760, TESTI20027890, TESTI20030710, TESTI20034130, TESTI20042290, TESTI20053960, TESTI20074640, TESTI20074660, TESTI20078640, THYMU10004590, TRACH20000790, TRACH20002370. TRACH20009440, UTERU10001600 [0070] The following 219 clones presumably belong to disease-related proteins. ADRGL10000020, ADRGL10001600, ADRGL20000740, ASTR020004170, BGGI120006840, BGGI120010970, BGGI120017140, BNGH410001770, BNGH420005320, BRACE10001870, BRACE20006980, BRACE20007180, BRACE20014550, BRACE20018550, BRACE20018590, BRACE20027550, BRACE20027720, BRACE20076850, BRACE20086550, BRAWH10000020, BRAWH10001640, BRAWH20001770, BRAWH20005030, BRAWH20005220, BRAWH20006330, BRAWH20006860, BRAWH20009840, BRAWH20011660, CD34C20000510, CTONG20005890, CTONG20019110, CTONG20024180, CTONG20025580, CTONG20037820, CTONG20055530, FCBBF20000940, FCBBF20009510, FCBBF40002820, FEBRA20001050, FEBRA20003990, FEBRA20004150, FEBRA20004540, FEBRA20009720. FEBRA20010930. FEBRA20011460. FEBRA20050790. FEBRA20057880. FEBRA20064760. FEBRA20067930. FEBRA20070170. FEBRA20075510. FEBRA20075660. HCASM20002140. HEART20004480. HLUNG10001050, HLUNG20000680, HSYRA10001370, HSYRA20006400, HSYRA20013320, HSYRA20016310, IMR3210000440, IMR3220007910, KIDNE10001040, KIDNE20003150, KIDNE20033730, KIDNE20042950, KIDNE20044110. KIDNE20050420. KIDNE20059080. KIDNE20063760. KIDNE20078110. LIVER10002300. LIVER10004330, LIVER20000330, LIVER20000370, MAMGL10001780, MESAN10001800, MESAN20002910, MESAN20005010, NB9N410001350, NHNPC10000840, NHNPC20002120, NT2NE10000730, NT2NE20002990, NT2NE20003690, NT2NE20005170, NT2NE20005360, NT2NE20006580, NT2NE20008090, NT2NE20013720, NT2NE20016340, NT2NE20055170, NT2RI20004120, NT2RI20004210, NT2RI20010910, NT2RI20014500, NT2RI20020410, NT2RI20029580, NT2RI20031540, NT2RI20033440, NT2RI20041900, NT2RI20056470, NT2RI20057230, NT2RI20067030, NT2RI20070960, NT2RI20074980, NT2RI20077540, NT2RI20080500, NT2RI20083960, NT2RI20084810, NT2RI20092150, NT2RI20092890, NT2RP60000350, NT2RP60001000, NT2RP60001230, NT2RP70000690, NT2RP70004250, NT2RP70028750, NT2RP70029060, NT2RP70032030, NT2RP70036290, NT2RP70042600, NT2RP70046560, NT2RP70049250, NT2RP70055020, NT2RP70062960, NT2RP70063040, NT2RP70065270, NT2RP70069860, NT2RP70071770, NT2RP70073810, NT2RP70074220, NT2RP70075370, NT2RP70079250, NT2RP70081440, NT2RP70090120, NT2RP70090190, NT2RP70093220, NT2RP70094980, NTONG10002460, NTONG20003630, NTONG20015500, OCBBF10001180, OCBBF20008240, PEBLM10000340, PEBLM20002480, PEBLM20003080, PEBLM20003950, PLACE50000800, PLACE60002050, PLACE60003790, PLACE60014430, PROST10001670, PROST10005360, PROST20002730, PROST20032320, PROST20033400, PROST20062600, PROST20072890, PROST20073890, PROST20085160, SALGL10001570, SKMUS10000140, SKMUS10001180, SKMUS10001290, SKMUS20000740, SKMUS20003900, SKMUS20007240, SKMUS20016340, SKNMC10002510, SKNMC20000650, SKNMC20003220, SMINT10000420. SMINT10000570, SMINT10001000, SMINT10001030, SMINT20004000, SPLEN10001430, SPLEN20001970, STOMA20000880, STOMA20003960, SYNOV20013740, SYNOV20014510, SYNOV20016480, TESTI10001270, TESTI10001310, TESTI20001200, TESTI20001770, TESTI20002530, TESTI20006000, TESTI20006990, TESTI20007620, TESTI20018830, TESTI20011800, TESTI20012690, TESTI20015120, TESTI20018520, TESTI20018790, TESTI20021490, TESTI20025160, TESTI20027070, TESTI20027290, TESTI20029120, TESTI20033250, TESTI20049820, TESTI20053960, TESTI20068660, TESTI20071830, TESTI20074640, TESTI20079510, TESTI20086570, TESTI20140360, THYMU10000830, THYMU10001760, THYMU10003590, THYMU10004910, TRACH20002370, UTERU10000960, UTERU20000470 [0071] The following 168 clones presumably belong to the category of enzymes and/or metabolism-related proteins. 3NB6920002810, ADRGL10001600, ADRGL10001650, BGGI120005330, BNGH410000340, BNGH410001770, BRACE10000420, BRACE20015080, BRACE20022020, BRACE20024680, BRACE20026850, BRACE20027360, BRACE20027720, BRACE20027920, BRACE20071380, BRACE20084430, BRAWH20001770, BRAWH20006510, BRAWH20006860, BRAWH20009840, BRAWH20011660, BRAWH20014180, BRAWH20014840, BRAWH20036890, BRAWH20059980, BRAWH20069890, BRAWH20089560, CTONG20013660, CTONG20019110, DFNES20002120, FCBBF20007330, FCBBF20015380, FEBRA20000350, FEBRA20001290, FEBRA20003110, FEBRA20024420, FEBRA20041100, FEBRA20045920, FEBRA20050790, FEBRA20052160, FEBRA20062700, FEBRA20063150, HEART20000350, HHDPC20000550, HHDPC20004550, HLUNG10001050, HLUNG20002550, HSYRA10001680, HSYRA20005100, HSYRA20015740, IMR3220008380, IMR3220009190, IMR3220012180, IMR3220013170, KIDNE20000410, KIDNE20003490, KIDNE20004220, KIDNE20005130, KIDNE20033050, KIDNE20040840, KIDNE20046810, KIDNE20056290, KIDNE20060530, KIDNE20063760, KIDNE20068800, KIDNE20073280, KIDNE20073520, KIDNE20078100, LIVER10000670, LIVER10002300, MAMGL10001780, MESAN20002910,

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MESAN20005010. NT2NE10000730. NT2NE10001850. NT2NE20002140. NT2NE20003270. NT2NE20003690.
     NT2NE20005860, NT2NE20013720, NT2NE20016340, NT2NE20016660, NT2RI10000480, NT2RI20010100,
     NT2RI20015400, NT2RI20020220, NT2RI20025300, NT2RI20033010, NT2RI20036780, NT2RI20037510,
     NT2RI20051500, NT2RI20068550, NT2RI20073840, NT2RI20074980, NT2RI20084810, NT2RI20087910,
     NT2RP70004770, NT2RP70006240, NT2RP70011660, NT2RP70026190, NT2RP70062960, NT2RP70072520,
     NT2RP70076100, NT2RP70081440, NT2RP70084060, NT2RP70085570, NT2RP70093700, NTONG10001820,
     OCBBF20018240, OCBBF20012 OCBBF20014080, OCBBF20014940, PANCR10000210, PEBLM20004790,
     PLACE50001050, PLACE50001130, PLACE60003790, PLACE60012810, PLACE60018860, PLACE60044540,
     PROST20031170, PROST20032320, PROST20033400, PROST20051210, PROST20064500, SKMUS10001290,
     SKMUS10001770, SKMUS20000740, SKMUS20007240, SKMUS20008630, SKMUS20009330, SKMUS20011290,
     SKNSH10001740, SKNSH20003470, SMINT10000160, SPLEN20001340, STOMA10001860, STOMA20001210,
     STOMA20004820, SYNOV20016480, TESTI10000700, TESTI10001380, TESTI20001540, TESTI20005910,
     TESTI20012690, TESTI20018270, TESTI20022560, TESTI20027070, TESTI20029120, TESTI20034190,
     TESTI20034980, TESTI20040000, TESTI20042070, TESTI20042950, TESTI20047120, TESTI20049820,
     TESTI20138320, TESTI20140360, TESTI30000020, THYMU10000830, THYMU10004910, THYMU20003170,
     THYMU20003690, TRACH20000150, TRACH20004720, TRACH20004970, TRACH20009260, UTERU10000960
     [0072] The following 23 clones presumably belong to the category of cell division- and/or cell proliferation-related
     proteins.
     BGGI120001610. BRACE20027550. BRACE20076850. BRAWH20005030. BRAWH20005220. FEBRA20075660.
     HCASM20002140, HLUNG10000640, IMR3220009730, NT2NE20003840, NT2RI20006850, NT2RI20041900,
     NT2RI20058110, NTONG10002460, NTONG20008780, SKMUS20016340, SKNMC20003220, SPLEN10001430,
     TESTI10001680, TESTI20001840, TESTI20021050, TESTI20035120, TESTI20057310
     [0073] The following 60 clones presumably belong to the category of cytoskeleton-related proteins.
     ADRGL10000020, BRACE20006980, BRACE20008850, BRACE20027960, BRACE20074470, BRACE20076630,
     BRACE20078820, BRACE20093070, BRAWH20000480, BRAWH20066220, CTONG20019550, CTONG20028160,
     CTONG20055530, DFNES20002680, FCBBF20005910, FEBRA20007720, FEBRA20008810, FEBRA20034290,
     FEBRA20043290, FEBRA20072000, HEART20004480, HEART20005200, HLUNG10001100, HSYRA20006050,
     IMR3220007910, KIDNE20040840, KIDNE20052960, NT2RI20014090, NT2RI20032220, NT2RI20058510,
     NT2RI20090660, NT2RP7000690, NT2RP70004250, NT2RP70028750, NT2RP70042600, NT2RP70049250,
    NT2RP70074220, NTONG20009660, OCBBF20011760, OCBBF20015280, PEBLM10000680, PROST10001670,
     PROST20033380, TESTI10000420, TESTI10000510, TESTI20003560, TESTI20004350, TESTI20006000,
     TESTI20006990, TESTI20008490, TESTI20008830, TESTI20011410, TESTI20015110, TESTI20016610,
     TESTI20020570, TESTI20024230, TESTI20031090, TESTI20031170, TESTI20039140, TESTI20078720
     [0074] The following 59 clones presumably belong to the category of nuclear proteins and/or RNA synthesis-related
     proteins.
     3NB6920002810, 3NB6920015280, BGGI120005440, BRACE10001150, BRACE20024780, BRACE20027550,
     BRAWH20005030, BRAWH20014180, BRAWH20069890, CTONG20024180, FEBRA20001290, FEBRA20075660,
     HEART20003090, HLUNG10000640, HSYRA10001680, HSYRA20005100, IMR3220008630, IMR3220012180,
     MAMGL10001780, NT2NE10001850, NT2NE20002140, NT2NE20003840, NT2NE20016660, NT2NE20054410,
     NT2RI20002820, NT2RI20006850, NT2RI20010910, NT2RI20025540, NT2RI20041900, NT2RI20053350,
     NT2RI20057230. NT2RI20060720. NT2RI20067030. NT2RI20068550. NT2RI20078840. NT2RI20087490.
     NT2RP70004770, NT2RP70013060, NT2RP70076430, NTONG20008780, PEBLM10000340, PLACE50000580,
     PLACE60003790, PROST20001760, PROST20062600, SKMUS10000220, SKMUS20016340, SKNMC20003220,
     SPLEN10001430, SPLEN20001970, TESTI10001680, TESTI20002530, TESTI20007840, TESTI20021050,
    TESTI20029120, TESTI20035120, TESTI20057310, TRACH20003930, TRACH20012890
     [0075] The following 24 clones presumably belong to the category of protein synthesis- and/or protein transport-
    related proteins.
     BRACE20078680, FEBRA20075510, IMR3220008380, KIDNE20005190, KIDNE20050420, MESAN20002910,
    NB9N410001350, NT2NE20005360, NT2RI20032050, NT2RI20032220, NT2RP70000760, NT2RP70076430,
    NT2RP70093940, OCBBF20008240, PLACE50000580, PROST20000530, SKMUS20000740, SKMUS20008630,
    TESTI20007840, TESTI20015120, TESTI20018690, TESTI20078720, THYMU10005580, UMVEN20001330
     [0076] The following 6 clones presumably belong to the category of cellular defense-related proteins.
    BRACE20014550, NT2RI20037510, NT2RI20053350, NT2RP70029060, NT2RP70062960, PLACE50001700
     [0077] The following 19 clones presumably belong to the category of development and/or differentiation-related pro-
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    BGGI120006930, CTONG20028200, FCBBF50002610, FEBRA20014920, FEBRA20017150, FEBRA20060920.
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MAMGL10001820, NESOP10000870, NHNPC10001240, NT2RI20078790, NT2RP7008120, NT2RP70018560, NT2RP70045410, OCBBF20002770, SALGL10000650, SMINT10001000, TESTI10000550, TESTI20026760,

### TESTI20078140

[0078] The following 158 clones presumably belong to the category of DNA- and/or RNA-binding proteins. 3NB6920002810, 3NB6920010220, 3NB6920015110, 3NB6920015570, ADRGL10000650, BGGI120006840, BGGI120006930, BNGH410000800, BNGH420005320, BRACE20014550, BRACE20020910, BRACE20024090, BRACE20024780, BRACE20071740, BRAWH10001640, BRAWH10001680, BRAWH20000340, BRAWH20006330, BRAWH20009010, BRAWH20014180, BRAWH20069890, CTONG20025580, CTONG20028200, D3OST20001840, FCBBF10005980, FCBBF20009510, FCBBF50002610, FEBRA20003970, FEBRA20003990, FEBRA20004540, FEBRA20008560, FEBRA20009720, FEBRA20017150, FEBRA20017900, FEBRA20050140, FEBRA20064760, FEBRA20067360, FEBRA20069420, FEBRA20072800, HEART20003090, HLUNG10000760, HSYRA10001370, HSYRA20016310, IMR3210002420, IMR3220007420, IMR3220008630, KIDNE20000510, KIDNE20039940, KIDNE20061490, KIDNE20078110, NESOP10000870, NHNPC10000840, NHNPC10001240, NHNPC20002120, NT2NE20002590, NT2NE20003840, NT2NE20008090, NT2NE20016660, NT2NE20054410, NT2RI20003410, NT2RI20004210, NT2RI20006850, NT2RI20010830, NT2RI20010910, NT2RI20025410, NT2RI20025850, NT2RI20057230, NT2RI20060710, NT2RI20067350, NT2RI20071330, NT2RI20074390, NT2RI20078790, NT2RI20078840, NT2RI20087140, NT2RI20087490, NT2RI20090650, NT2RP60001000, NT2RP60001270, NT2RP70002710, NT2RP70008120, NT2RP70013060, NT2RP70018560, NT2RP70024500, NT2RP70032030, NT2RP70042040, NT2RP70045410, NT2RP70046560, NT2RP70055130, NT2RP70061620, NT2RP70062960, NT2RP70064900, NT2RP70069860, NT2RP70075370, NT2RP70081670, NT2RP70085570, NT2RP70087200, NT2RP70090190, NTONG20003340, NTONG20008780, NTONG20015500, OCBBF20011010, OCBBF20015860, PEBLM10000340, PEBLM20001120, PEBLM20002700, PEBLM20003080, PLACE60002050, PLACE60005550, PLACE60021510, PLACE60030380, PROST20001760, PROST20003250, PROST20018230, PROST20031170, PROST20062600, PROST20073170, SALGL10000650, SKMUS10000640, SKMUS20014920, SKMUS20016340, SKNMC20000650, SKNMC20002240, SKNMC20003220, SKNMC20003560, SMINT10001000, SMINT20005450, SPLEN10001430, SPLEN20000200, SPLEN20000720, SPLEN20001970, SYNOV20010140, SYNOV20013740, SYNOV20014510, TESTI10000550, TESTI20001200, TESTI20007070, TESTI20010490, TESTI20013450, TESTI20015560, TESTI20018150, TESTI20021050, TESTI2002149 TESTI20026760, TESTI20027890, TESTI20030710, TESTI20033270, TESTI20034130, TESTI20035120, TESTI20053960, TESTI20074640, TESTI20074660, TESTI20078640, THYMU10004590, TRACH20000790, TRACH20002370, TRACH20009440, TRACH20012890, UTERU10001600

[0079] The following 63 clones presumably belong to the category of ATP- and/or GTP-binding proteins.

3NB6920002810, BNGH410000390, BRACE20022020, BRACE20028120, BRACE20071380, BRAWH2000480, BRAWH20006860, BRAWH20066220, CTONG20013200, DFNES20002680, FEBRA20043290, FEBRA20052160, FEBRA20072000, FEBRA20075510, HHDPC20000550, HLUNG20001160, HSYRA10001680, HSYRA20005100, HSYRA20006050, KIDNE20040840, MAMGL10001780, MESAN20002910, NB9N410001350, NT2NE20003690, NT2NE20005170, NT2NE20016660, NT2NE20055170, NT2RI20068550, NT2RI20073840, NT2RP70004250, NT2RP70011660, NT2RP70029060, NT2RP70036290, NT2RP70042600, NT2RP70046870, NT2RP70062960, NT2RP70081370, NT2RP70081440, NT2RP70093700, OCBBF20008240, OCBBF20015280, PEBLM20004790, PLACE50001700, PLACE60003790, PROST20018990, PROST20033400, SKMUS20008630, SMINT10000420, TESTI20001540, TESTI20003560, TESTI20005910, TESTI20006950, TESTI20004980, TESTI200492290, TESTI20047120, TESTI20049820, TESTI20057310

[0080] Among the clones other than the ones shown above, NTONG10001300 is a clone which was predicted to highly possibly belong to the category of secretory protein and/or membrane protein based on the result of domain search by Pfam.

45 FEBRA20017060, NT2RI20066790, SMINT10000710

[0081] The three clones shown above are clones which were predicted to highly possibly belong to the category of glycoprotein-related protein based on the result of domain search by Pfam.

BRACE20080970, BRACE20092120, BRAWH10001300, FEBRA20019890, KIDNE20031850, KIDNE20060140, MESAN20000920, NB9N410000470, NT2RI20071480, NT2RI20078910, NT2RP70088550, NTONG20016120, OCBBF10000910, PROST20094830, SKNSH10003010, SPLEN20002670, TESTI20031960, TESTI20036250, TESTI20037810, TESTI20083870, TESTI20177400

[0082] The 21 clones shown above are clones which were predicted to highly possibly belong to the category of signal transduction-related protein based on the result of domain search by Pfam.

3NB6920009120, 3NB6920014710, BRACE10001660, BRACE20083850, BRAWH20004760, BRAWH20012030, CTONG20011390, CTONG20018200, FEBRA20007870, FEBRA20043250, HHDPC20003150, NT2RI10000270, NT2RI20036950, NT2RI20053680, NT2RI20072540, NT2RI20083360, NT2RP70030550, OCBBF20013070, OCBBF20015270, PLACE60046630, PROST10003430, PROST20067370, SKMUS10001040, SKNMC20015960, TESTI20030050, TESTI20033540, TESTI20035890, TESTI20068720, TRACH20004110

[0083] The 29 clones shown above are clones which were predicted to highly possibly belong to the category of transcription-related protein based on the result of domain search by Pfam.

BNGH410001900, BRACE20080970, BRACE20092120, BRAWH20093600, FEBRA20003770, FEBRA20024290, HLUNG10000990, KIDNE20004030, MESAN20000920, NB9N420001040, NT2NE10000140, NT2NE20001740, NT2RI20050610, NT2RI20055640, NT2RI20072540, NT2RI20074690, NT2RP60000860, NT2RP70036470, NT2RP70036800, NT2RP70072210, NT2RP70074060, NT2RP70084870, NTONG10001300, NTONG10002640, NTONG20016120, OCBBF10000910, OCBBF10001190, OCBBF20007190, SKMUS20001170, SKMUS20016620, SKNMC20000970, SKNMC20015960, SYNOV10001280, TESTI20002380, TESTI20006270, TESTI20013300, TESTI20031520, TESTI20036250, TESTI20037810, TESTI20064830, TESTI20083870, TRACH20006750, TRACH20016070

[0084] The 43 clones shown above are clones which were predicted to highly possibly belong to the category of enzyme and/or metabolism-related protein based on the result of domain search by Pfam.

NT2RI20064120

[0085] The 1 clone shown above is a clone which was predicted to highly possibly belong to the category of cell division and/or cell proliferation-related protein based on the result of domain search by Pfam.

BRACE20083800. KIDNE20004970

[0086] The 2 clones shown above are clones which were predicted to highly possibly belong to the category of cytoskeleton-related protein based on the result of domain search by Pfam.

3NB6920009120, 3NB6920014710, BRACE10001660, BRACE20083850, BRAWH20004760, BRAWH20012030, BRAWH20064500, CTONG20011390, CTONG20018200, FEBRA20007870, FEBRA20043250, HCASM20003070, HHDPC20003150, NT2RI10000270, NT2RI20036950, NT2RI20053680, NT2RI20072540, NT2RI20083360, NT2RP70012310, NT2RP70030550, NT2RP70036470, OCBBF20013070, OCBBF20015270, PLACE60046630, PROST10003430, PROST20067370, SKMUS10001040, SKNMC20000970, SKNMC20015960, TEST120030050, TEST120032280, TEST120033540, TEST120035890, TEST120068720, TRACH20004110

[0087] The 34 clones shown above are clones which were predicted to highly possibly belong to the category of DNA- and/or RNA-binding protein based on the result of domain search by Pfam. NT2RI20064120

[0088] The 1 clone shown above is a clone which was predicted to highly possibly belong to the category of ATP-and/or GTP-binding proteins based on the result of domain search by Pfam.

[0089] The 185 clones shown below are clones which were unassignable to any of the above-mentioned categories, but have been predicted to have some functions based on homology search using their full-length nucleotide sequences and motif search in their estimated ORFs.

3NB6910001160, ASTRO20004170, BNGH410000030, BNGH410001900, BRACE20005250, BRACE20014770, BRACE20016730, BRACE20017370, BRACE20024310, BRACE20028960, BRACE20077840, BRACE20083850, BRAWH20003230, BRAWH20009440, BRAWH20076050, CTONG20018200, CTONG20027210, CTONG20064490, DFNES20004320, FCBBF10006870, FCBBF20002760, FCBBF20012110, FEBRA20000530, FEBRA20005360, FEBRA20007570, FEBRA20011330, FEBRA20019890, FEBRA20030540, FEBRA20043250, FEBRA20044900, FEBRA20048180, FEBRA20053800, FEBRA20068730, FEBRA20070170, HCASM10000210, HCASM20005360, HHDPC20001150, HHDPC20001490, HLUNG10000990, HSYRA10001190, HSYRA20001350, HSYRA20006400, IMR3220002230, IMR3220014910, KIDNE10001520, KIDNE20003750, KIDNE20004970, KIDNE20005740, KIDNE20031850, KIDNE20043440, KIDNE20056760, KIDNE20059080, KIDNE20060140, KIDNE20060300, KIDNE20067750, LIVER10000790, LIVER10004330, MESAN10001010, MESAN20000920, NB9N410000470, NB9N420001040, NB9N420004950, NT2NE10000180, NT2NE10000630, NT2NE20013370, NT2NE20016970, NT2NE20035690, NT2NE20053710, NT2RI20006690, NT2RI20013420, NT2RI20013850, NT2RI20015190, NT2RI20016210, NT2RI20022700, NT2RI20025170, NT2RI20029260, NT2RI20029580, NT2RI20043040, NT2RI20061830, NT2RI20064120, NT2RI20065060, NT2RI20074690, NT2RI20077230, NT2RI20082210, NT2RI20083960, NT2RI20088120, NT2RP60000080, NT2RP60000350, NT2RP60000720, NT2RP60000860, NT2RP70009060, NT2RP70010800, NT2RP70022430, NT2RP70028290, NT2RP70033040, NT2RP70036320, NT2RP70036800, NT2RP70042330, NT2RP70049150, NT2RP70052050, NT2RP70055020, NT2RP70063040, NT2RP70072210, NT2RP70084410, NT2RP70084870, NTONG10000520, NTONG10001230, NTONG10001300, OCBBF10001220, OCBBF20007190, OCBBF20011400, OCBBF20014020, OCBBF20014940, PEBLM10001440, PEBLM20002130, PLACE50000370, PLACE50000800, PLACE60014430, PLACE60024190, PLACE60033990, PLACE60038500, PLACE60043970, PLACE60044640, PROST20023380, PROST20034720, PROST20067370, PROST20079740, SALGL10000470, SKMUS10000140, SKMUS10001040, SKMUS10001180, SKMUS20001170, SKMUS20003650, SKMUS20003900, SKMUS20004580, SKMUS20009020, SKMUS20009540, SKMUS20010080, SKMUS20011470, SKMUS20015430, SKMUS20016620, SKNMC20000970, SKNMC20015960, SMINT10001030, SMINT20001450, SMINT20003960, SMINT20004000, SPLEN20002670, SYNOV10001280, SYNOV20002910.

SYNOV20008200, TESTI10000250, TESTI10000640, TESTI10001310, TESTI10001910, TESTI20000440,

TESTI2002070, TESTI2002080, TESTI20014120, TESTI20016650, TESTI20022230, TESTI20022940, TESTI20024610, TESTI20027290, TESTI20030050, TESTI20030590, TESTI20030740, TESTI20035510, TESTI20035740, TESTI20041220, TESTI20052680, TESTI20054080, TESTI20064830, TESTI20065720, TESTI20068660, TESTI20071830, TESTI20078670, TESTI20083870, THYMU10000020, THYMU10002910, TRACH10000300, TRACH20006750, TRACH20007800, TRACH20008940, TRACH20013950

[0090] Further, the reason is that a polypeptide does not always belong solely to a single category of the above-described functional categories, and therefore, a polypeptide may belong to any of the predicted functional categories. Besides, additional functions can be found for the clones classified into these functional categories by further analyses. [0091] Since the polypeptide encoded by clones of the invention contains full-length amino acid sequence, it is possible to analyze its biological activity, and its effect on cellular conditions such as cell proliferation and differentiation by expressing the polypeptide as a recombinant polypeptide using an appropriate expression system, injecting the recombinant into the cell, or raising a specific antibody against the polypeptide.

[0092] The biological activities of respective polypeptides can be analyzed by the methods as shown below. Secretory protein, transmembrane protein:

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"Ion Channels" (Ed., R. H. Ashley, 1995) of "The Practical Approach Series" (IRL PRESS),

"Growth Factors" (Eds., I. McKay, I. Leigh, 1993),

"Extracellular Matrix" (Eds., M. A. Haralson, J. R. Hassell, 1995);

# 20 Glycoprotein-related protein:

"Glycobiology" (Eds., M. Fukuda, A. Kobata, 1993) of "The Practical Approach Series" (IRL PRESS),

"Glycoprotein Analysis in Biomedicine" (Ed., Elizabeth F.Hounsell, 1993) of "Method in Molecular Biology" (Humana Press) series;

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### Signal transduction-related protein:

"Signal Transduction" (Ed., G. Milligan, 1992) of "The Practical Approach Series" (IRL PRESS),

"Protein Phosphorylation" (Ed., D. G. Hardie, 1993), or

"Signal Transduction Protocols" (Eds., David A. Kendall, Stephen J.Hill, 1995) of "Method in Molecular Biology" (Humana Press) series;

# Transcription-related protein:

"Gene Transcription" (Eds., B. D. Hames, S. J. Higgins, 1993) of "The Practical Approach Series" (IRL PRESS), "Transcription Factors" (Ed., D.S.Latchman, 1993);

# Enzyme and/or metabolism-related protein:

"Enzyme Assays" (Eds., ROBERT EISENTHAL and MICHAEL J. DANSON, 1992) of "The Practical Approach Series" (IRL PRESS); Cell division and/or cell proliferation-related protein: "Cell Growth, Differentiation and Senescence" (Ed., GEORGE STUDZINSKI, 2000) of "The Practical Approach Series" (IRL PRESS);

## 45 Cytoskeleton-related protein:

"Cytoskeleton: Signalling and Cell Regulation" (Eds., KERMIT L. CARRAWAY and CAROLIE A. CAROTHERS CARRAWAY, 2000) of "The Practical Approach Series" (IRL PRESS),

"Cytoskeleton Methods and Protocols" (Ed., Gavin, Ray H., 2000) of "Method in Molecular Biology" (Humana Press) series;

Nuclear protein and/or RNA synthesis-related protein:

"Nuclear Receptors" (Ed., DIDIER PICARD, 1999) of "The Practical Approach Series" (IRL PRESS), "RNA Processing" (Eds., STEPHEN J. HIGGINS and B. DAVID HAMES, 1994);

Protein synthesis and/or transport-related protein:

"Membrane Transport" (Ed., STEPHEN A. BALDWIN, 2000) of "The Practical Approach Series" (IRL PRESS), "Protein Synthesis Methods and Protocols" (Eds., Martin, Robin, 1998) of "Method in Molecular Biology" (Humana Press) series;

# 5 Cellular defense-related protein:

"DNA Repair Protocols" (Henderson, Daryl S., 1999) of "Method in Molecular Biology" (Humana Press) series, "Chaperonin Protocols" (Eds., Schneider, Christine, 2000);

# 10 Development and/or differentiation-related protein:

"Developmental Biology Protocols" (Eds., ROBERT EISENTHAL and MICHAEL J. DANSON, 1992) of "Method in Molecular Biology" (Humana Press) series;

# 15 DNA- and/or RNA-binding protein:

"DNA-Protein Interactions Principles and Protocols" (Eds., Kneale, G. Geoff, 1994) of "Method in Molecular Biology" (Humana Press) series,

"RNA-Protein Interaction Protocols" (Eds., Haynes, Susan R., 1999);

ATP- and/or GTP-binding protein:

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"Signal Transduction Protocols" (Eds., David A. Kendall, Stephen J. Hill, 1995) of "Method in Molecular Biology" (Humana Press) series.

[0093] In the categorization, the clone predicted to belong to the category of secretory and/or membrane protein means a clone having hit data with some annotation, such as growth factor, cytokine, hormone, signal, transmembrane, membrane, extracellular matrix, receptor, G-protein coupled receptor, ionic channel, voltage-gated channel, calcium channel, cell adhesion, collagen, connective tissue, etc., suggesting that it was a secretory or membrane protein, or a clone in which the presence of nucleotide sequence encoding a signal sequence or transmembrane region was suggested by the results of PSORT and SOSUI analyses for deduced ORF.

[0094] The clone predicted to belong to the category of glycoprotein-related protein means a clone having hit data with some annotation, such as glycoprotein, suggesting that the clone encodes a glycoprotein-related protein.

[0095] The clone predicted to belong to the category of signal transduction-related protein means a clone having hit data with some annotation, such as serine/threonine-protein kinase, tyrosine-protein kinase, SH3 domain, SH2 domain, etc., suggesting that the clone encodes a signal transduction-related protein.

[0096] The clone predicted to belong to the category of transcription-related protein means a clone having hit data with some annotation, such as transcription regulation, zinc finger, homeobox, etc., suggesting that the clone encodes a transcription-related protein.

[0097] The clone predicted to belong to the category of disease-related protein means a clone having hit data with some annotation, such as disease mutation, syndrome, etc., suggesting that the clone encodes a disease-related protein, or a clone whose full-length nucleotide sequence has hit data for Swiss-Prot, GenBank, UniGene, or nr, where the hit data corresponds to genes or polypeptides which have been deposited in the Online Mendelian Inheritance in Man (OMIM) (http://www.ncbi.nlm.nih.gov/Omim/), which is the human gene and disease database described later.

[0098] The clone predicted to belong to the category of enzyme and/or metabolism-related protein means a clone having hit data with some annotation, such as metabolism, oxidoreductase, E. C. No. (Enzyme commission number), etc., suggesting that the clone encodes an enzyme and/or metabolism-related protein.

[0099] The clone predicted to belong to the category of cell division and/or cell proliferation-related protein means a clone having hit data with some annotation, such as cell division, cell cycle, mitosis, chromosomal protein, cell growth, apoptosis, etc., suggesting that the clone encodes a cell division and/or cell proliferation-related protein.

[0100] The clone predicted to belong to the category of cytoskeleton-related protein means a clone having hit data with some annotation, such as structural protein, cytoskeleton, actin-binding, microtubles, etc., suggesting that the clone encodes a cytoskeleton-related protein.

[0101] The clone predicted to belong to the category of nuclear protein and/or RNA synthesis-related protein means a clone having hit data with some annotation, such as nuclear protein, RNA splicing, RNA processing, RNA helicase, polyadenylation, etc., suggesting that the clone encodes a nuclear protein and/or RNA synthesis-related protein.

[0102] The clone predicted to belong to the category of protein synthesis and/or transport-related protein means a clone having hit data with some annotation, such as translation regulation, protein biosynthesis, amino-acid biosyn-

thesis, ribosomal protein, protein transport, signal recognition particle, etc., suggesting that the clone encodes a protein synthesis and/or transport-related protein.

[0103] The clone predicted to belong to the category of cellular defense-related protein means a clone having hit data with some annotation, such as heat shock, DNA repair, DNA damage, etc., suggesting that the clone encodes a cellular defense-related protein.

[0104] The clone predicted to belong to the category of development and/or differentiation-related proteins means a clone having hit data with some annotation, such as developmental protein, etc., suggesting that the clone encodes a development and/or differentiation-related protein.

[0105] The clone predicted to belong to the category of DNA- and/or RNA-binding protein means a clone having hit data with some annotation, such as DNA-binding, RNA-binding, etc.

[0106] The clone predicted to belong to the category of ATP- and/or GTP-binding protein means a clone having hit data with some annotation, such as ATP-binding, GTP-binding, etc.

[0107] As to a protein involved in a disease, it is possible to perform a functional analysis as described above, but also possible to analyze correlation between the expression or the activity of the protein and a certain disease by using a specific antibody that is obtained by using expressed protein. Alternatively, it is possible to utilize the database OMIM, which is a database of human genes and diseases, to analyze the protein. Further, new information is constantly being deposited in the OMIM database. Therefore, it is possible for one skilled in the art to find a new relationship between a particular disease and a gene of the present invention in the most up-to-date database. The proteins involved in diseases are useful for developing a diagnostic marker or medicines for regulation of their expression and activity, or as a target of gene therapy.

[0108] Also, as for a secretory protein, membrane protein, signal transduction-related protein, glycoprotein-related protein, or transcription-related protein, etc., search of the OMIM with the following keywords resulted in the finding that the proteins are involved in many diseases (the result of the OMIM search for secrete and membrane proteins is shown below). Also, association between proteins related to signal transduction or transcription and diseases is reported in "Transcription Factor Research-1999" (Fujii, Tamura, Morohashi, Kageyama, and Satake edit, (1999) Jikken-Igaku Zoukan, Vol.17, No.3), and "Gene Medicine" (1999) Vol.3, No.2). When cancer is used as an example, as described in "Biology of Cancer" (S. Matsubara, 1992) of Life Science series (Shokabo), many proteins are involved in cancers, which include enzyme and/or metabolism-related proteins, cytoskeleton-related proteins, cell division and/or cell proliferation-related proteins as well as secretory proteins, membrane proteins, signal transduction-related proteins, glycoprotein-related proteins but also secretory proteins, membrane proteins, signal transduction-related proteins, glycoprotein-related proteins, transcription-related proteins, etc. are often involved in diseases, and thus they can be useful targets in the field of medical industry.

[0109] The result of the OMIM search for secretory and membrane proteins is shown below, in which the keywords,

(1) secretion protein,

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- (2) membrane protein,
- (3) channel, and
- (4) extracellular matrix were used.

[0110] Shown in the search result are only the accession numbers in the OMIM. Using the number, data showing the relationship between a disease and a gene or protein can be seen. The OMIM data has been renewed everyday.

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1) Secretion protein
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[0111] In addition to these, the various keywords shown in the above-mentioned categorization or others can be used for the OMIM search and the result may suggest the involvement thereof in diseases.

[0112] Further, the use of nucleotide sequences of cDNAs of the present invention enables analyzing the expression frequency of genes corresponding to the cDNAs. In addition, functions of the genes can be predicted based on the information obtained by the expression frequency analysis.

[0113] There are several methods for analyzing the expression levels of genes involved in diseases. Differences in gene expression levels between diseased and normal tissues are studied by the analytical methods using, for example, Northern hybridization, RT-PCR, DNA microarray, etc. (Experimental Medicine, Vol.17, No. 8, 980-1056 (1999); Cell Engineering (additional volume) DNA Microarray and Advanced PCR Methods, Muramatsu & Nawa (eds.), Shujunsya (2000)). By computer analysis, in addition to these analysis methods, the nucleotide sequences of expressed genes can be compared to analyze the expression frequency. For example, there is a database called "BODYMAP"; gene clones are extracted at random from cDNA libraries of various tissues and/or cells, and the clones homologous to one another are assigned to a single cluster based on the information of nucleotide sequence homology at the 3'-end; genes are classified into any clusters, and the numbers of clones in the respective clusters are compared to gain the information on expression frequency (http://bodymap.ims.u-tokyo.ac.jp/).

**[0114]** When explicit difference in the expression levels between diseased tissues and normal tissues is observed for a gene by these analytical methods, it can be conclude that the gene is closely involved in a disease or disorder. Instead of diseased tissues, when gene expression is explicitly different between normal cells and cells reproducing disease-associated specific features, it can be concluded that the gene is closely involved in a disease or disorder.

[0115] From the 1639 clones whose full-length nucleotide sequences had been revealed, genes involved in particular pathology or functions were selected by the use of databases shown below (see Example 7; "Expression frequency analysis in silico"). The database used in the analyses of the present invention contains nucleotide sequences of 770,546 clones, and the population of the database is large enough for the analysis. The sequence information in the database was obtained by selecting cDNA clones at random from cDNA libraries derived from the various tissues and cells shown in Example 1 and determining the 5'-end sequences thereof.

[0116] Then, the nucleotide sequences of respective clones in this database were categorized (clustered) based on the nucleotide sequence homology determined with a search program; the number of clones belonging to every cluster of each library was determined and normalized; thus, the ratio of a certain gene in a cDNA library was determined. This analysis provided the information of the expression frequency of a gene in a tissue or cell that is the source of the cDNA library.

[0117] Then, in order to analyze the expression of genes corresponding to the nucleotide sequences of cDNAs of the present invention in tissues and cells, the libraries from the tissues or cells, which had been used in the large-scale cDNA analyses, were taken as subjects to compare the expression levels between different tissues or cells. Namely, the expression frequency was analyzed by comparing the previously normalized values between tissues or cells from which 600 or more cDNA clones whose nucleotide sequences had been analyzed were derived. The result of this analysis showed that the cDNA clones corresponded to the genes involved in the pathology and functions, which are indicated below. Each value in Tables 3 to 39 indicated below represents a relative expression frequency; the higher the value, the higher the expression level.

# 5 Osteoporosis-related genes

5

[0118] Osteoporosis is a pathology in which bones are easily broken owing to overall decrease in components of bone. The onset correlates to the balance between the functions of osteoblast producing bone and osteoclast absorbing bone, namely bone metabolism. Thus, the genes involved in the increase of osteoclasts differentiating from precursor cells of monocyte/macrophage line (Molecular Medicine 38. 642-648. (2001)) are genes involved in osteoporosis relevant to bone metabolism.

[0119] A nucleotide sequence information-based analysis was carried out to identify the genes whose expression frequencies are higher or lower in CD34+ cell (cell expressing a glycoprotein CD34) treated with the osteoclast differentiation factor (Molecular Medicine 38. 642-648. (2001)) than in the untreated CD34+ cell, which is the precursor cell of monocyte/macrophage line. The result of comparative analysis for the frequency between the cDNA libraries prepared from the RNA of CD34+ cells (CD34C) and from the RNA of CD34+ cells treated with the osteoclast differentiation factor (D30ST, D60ST or D90ST) showed that the genes whose expression levels were different between the two were 41 clones indicated in Table 3. These clones are involved in osteoporosis.

### Genes involved in neural cell differentiation

[0120] Genes involved in neural cell differentiation are useful for treating neurological diseases. Genes with varying expression levels in response to induction of cellular differentiation in neural cells are thought to be involved in neurological diseases.

[0121] A survey was performed for genes whose expression levels are varied in response to induction of differentiation (stimulation by retinoic acid (RA) or growth inhibitor treatment after RA stimulation) in cultured cells of a, neural strain, NT2. The result of comparative analysis of cDNA libraries derived from undifferentiated NT2 cells (NT2RM) and the cells subjected to the differentiation treatment (NT2RP, NT2RI or NT2NE) showed that the genes whose expression levels were different between the two were 500 clones indicated in Table 4. These genes are neurological disease-related genes.

# Cancer-related genes

- [0122] It has been assumed that, distinct from normal tissues, cancer tissues express a distinct set of genes, and thus the expression thereof can contribute to the carcinogenesis in tissues and cells. Thus, genes whose expression patterns in cancer tissues are different from those in normal tissues are cancer-related genes. Search was carried out for the genes whose expression levels in cancer tissues were different from those in normal tissues.
- [0123] The result of comparative analysis of cDNA libraries derived from breast tumor (TBAES) and normal breast (BEAST) showed that the genes whose expression levels were different between the two were 11 clones indicated in Table 5.
  - [0124] The result of comparative analysis of cDNA libraries derived cervical tumor (TCERX) and normal cervical duct (CERVX) showed that the genes whose expression levels were different between the two were 10 clones indicated in Table 6
- [0125] The result of comparative analysis of cDNA libraries derived from colon tumor (TCOLN) and normal colon (COLON) showed that the genes whose expression levels were different between the two were 5 clones indicated in Table 7.
  - [0126] The result of comparative analysis of cDNA libraries derived from esophageal tumor (TESOP) and normal esophagus (NESOP) showed that the genes whose expression levels were different between the two were 5 clones indicated in Table 8.
  - [0127] The result of comparative analysis of cDNA libraries derived from kidney tumor (TKIDN) and normal kidney (KIDNE) showed that the genes whose expression levels were different between the two were 205 clones indicated in Table 9.
  - [0128] The result of comparative analysis of cDNA libraries derived from liver tumor (TLIVE) and normal liver (LIVER) showed that the genes whose expression levels were different between the two were 35 clones indicated in Table 10.
  - [0129] The result of comparative analysis of cDNA libraries derived from lung tumor (TLUNG) and normal lung (HLUNG) showed that the genes whose expression levels were different between the two were 62 clones indicated in Table 11.
- [0130] The result of comparative analysis of cDNA libraries derived from ovary tumor (TOVER) and normal ovary (NOVER) showed the genes whose expression levels were different between the two were 7 clones indicated in Table 12.
  - [0131] The result of comparative analysis of cDNA libraries derived from stomach tumor (TSTOM) and normal stomach (STOMA) showed that the genes whose expression levels were different between the two were 41 clones indicated in Table 13
- 45 [0132] The result of comparative analysis of cDNA libraries derived from uterine tumor (TUTER) and normal uterus (UTERU) showed that the genes whose expression levels were different between the two were 94 clones indicated in Table 14.
  - [0133] The result of comparative analysis of cDNA libraries derived from tongue cancer (CTONG) and normal tongue (NTONG) showed that the genes whose expression levels were different between the two were 178 clones indicated in Table 15.
  - [0134] These genes are involved in cancers.
  - [0135] Further, there is a method to search for genes involved in development and differentiation, which is the expression frequency analysis in which the expression levels of genes are compared between developing and/or differentiating tissues and/or cells and adult tissues and/or cells. The genes involved in tissue development and/or differentiation are genes participating in tissue construction and expression of function, and thus are useful genes, which are available for regenerative medicine aiming at convenient regeneration of injured tissues.
  - [0136] By using the information of gene expression frequency gained from the database of 5'-end nucleotide sequences described above, genes involved in development or differentiation of particular tissues were selected from

the 1639 clones whose full-length nucleotide sequence had been revealed (see Example 7).

[0137] The result of comparative analysis of cDNA libraries derived from fetal brain (FCBBF, FEBRA or OCBBF) and adult brain (BRACE, BRALZ, BRAMY, BRAWH, BRCAN, BRCOC, BRHIP, BRSSN, BRSTN or BRTHA) showed that the genes whose expression levels were different between the two were 745 clones indicated in Tables 16 to 36.

- [0138] The result of comparative analysis of cDNA libraries derived from fetal heart (FEHRT) and adult heart (HEART) showed that the genes whose expression levels were different between the two were 54 clones indicated in Table 37.

  [0139] The result of comparative analysis of cDNA libraries derived from fetal kidney (FEKID) and adult kidney (KIDNE) showed that the genes whose expression levels were different between the two were 145 clones indicated in Table 38.
- [0140] The result of comparative analysis of cDNA libraries derived from fetal lung (FELNG) and adult lung (HLUNG) showed that the genes whose expression levels were different between the two were 63 clones indicated in Table 39. These genes are involved in regeneration of tissues and/or cells.
  - [0141] The expression frequency or the like can be analyzed by PCR based on the nucleotide sequences of cDNAs of the present invention. There are some known methods for comparing the quantities of amplification products obtained by PCR. For example, the band intensities can be determined by ethidium bromide staining. With RI-labeled or fluorescently labeled primers, the RI signal or fluorescence intensity can be assayed for the quantity of labeled amplification products. Alternatively, the quantity of amplification products can also be determined by measuring the RI signal or the fluorescence intensity from the RI-labeled or fluorescently labeled probe hybridizing to the products. The assay results thus obtained are compared and then the clones exhibiting differences in the expression levels can be selected.
- 20 [0142] There are some quantitative PCR methods: a PCR method using internal standards; a competitive PCR, in which the quantification is achieved by adding, to a sample, a dilution series of a known quantity of a template RNA and by comparing the quantity of an amplification product derived from the RNA of interest with the quantity of an amplification product derived from the template RNA. These methods overcome the problems of errors in the amount of amplification products among tubes and of the plateau effect. ATAC-PCR (Adaptor-tagged competitive PCR) is a method of competitive PCR which is practiced by using multiple adapters of different sizes attached to a gene whose 3'-end nucleotide sequence has previously been determined. The ratio of expression frequency of a single mRNA species from a number of tissues (cells) can be assayed in a single step (Nucleic Acids Research 1997, 25(22): 4694-4696; "DNA Micro-array and Advanced PCR Techniques", Cell Technology, supplement, Eds., Muramatsu and Nawa (Shujunsha, 2000): 104-112).
- [0143] If it is observed, by using these analytical methods, that the expression levels of genes are evidently varied during major cellular events (such as differentiation and apoptosis), the genes are involved in the cellular events and accordingly are candidates for disease- and/or disorder-related genes. Further, genes exhibiting tissue-specific expression are genes playing important parts in the tissue functions and, therefore, can be candidates for genes involved in diseases and/or disorders affecting the tissues.
- For example, inflammation is an important biological response that is known to be involved in various diseases. The representative inflammation-inducing factors include TNF-α (Tumor Necrosis Factor-alpha), LPS (Lipopolysaccharides), etc. Many genes have been identified as genes located downstream of the TNF-α or LPS stimulation. The respective stimulations are transduced through independent pathways of signaling cascade. There exists another signaling cascade for both stimulations, wherein NF-κB is a common transducing molecule shared by the two stimulations (Cell 1995, 80:529-532). It has also been revealed that many inflammation-related genes, including IL-2, IL-6 and G-CSF, are varied in the expression levels thereof in response to the signal through the common pathway (Trends Genet. 1999, 15(6): 229-235). It is assumed that genes whose expression levels are varied in response to the stimulation of TNF-α or LPS also participate in inflammation.
  - [0145] Further, the infection of Helicobacter *pylori* to the gastric epithelia is known to cause gastritis and gastroduodenal ulcer (Mebio 2000, July, 17(7): 16-33). Thus, the genes whose expression levels are altered depending on coculturing cells with *Helicobacter pylori* may be involved in gastritis and gastroduodenal ulcer. A recent study has suggested that *Helicobacter pylori* strongly activates the NF-κB pathway, *via* the TRAF2/6-IKKβ pathway, namely, via the same pathway shared by TNF-α (Gastroenterology 2000, 119: 97-108).
  - [0146] THP-1 cell, which is a human monocyte cell line, was cultured in the presence of TNF- $\alpha$  (Tumor Necrosis Factor-alpha) or LPS (Lipopolysaccharides). The genes whose expression levels were altered owing to the presence of the agent were searched for, and the result showed that the clones whose expression levels were increased owing to the presence of TNF- $\alpha$  were ADRGL10000180, BRACE20030780, BRACE20077640, BRACE20083850, BRAWH20004430, FCBBF10006180, FEBRA20003780, FEBRA20006800, FEBRA20012940, FEBRA20015840, HEART20004480, HLUNG10000370, HLUNG20001160, HSYRA20013320, IMR3220008380, KIDNE10001520, KIDNE20040540, KIDNE20061490, KIDNE20062990, NT2NE10001630, NT2NE20003920, NT2NE20005500, NT2RI20014500, NT2RI20016570, NT2RI20078270, NT2RI20083360, NTONG10002570, PUAEN10003220, SKNMC10000290, STOMA20002570, TESTI20011340, UTERU20004850.
  - [0147] On the other hand, the clones whose expression levels were decreased owing to the presence of TNF-α were

BRACE20013400, BRACE20091880, HEART20005060, HLUNG20001760, IMR3220008590, NT2NE10001850, NT2RI20018660, NT2RI20053350, NT2RI20070480, PLACE60047380, STOMA20002890, SYNOV20001770, TRACH20001960.

[0148] Further, the clones whose expression levels were increased owing to the presence of LPS were FCBBF10006180, FEBRA20015840, HLUNG10000370, HLUNG20001160, HSYRA20013320, KIDNE20040540, KIDNE20061490, NT2NE10001630, NT2NE20003920, NT2NE20005500, NT2RI20014500, NT2RI20016570, NT2RI20078270, NTONG10002570, PUAEN10003220, STOMA20002570, TESTI20011340. On the other hand, the clones whose expression levels were decreased owing to the presence of LPS were BRACE20013400, BRACE20091880, HEART20005060, HLUNG20001760, NT2RI20070480, UMVEN20001330.

[0149] These clones are involved in inflammation.

[0150] MKN45, which is a gastric cancer cell line, was co-cultured with *Helicobacter pylori*. The genes whose expression levels were altered owing to the presence of *Helicobacter pylori* were searched for, and the result showed that the clones whose expression levels were increased owing to the presence of *Helicobacter pylori* were BRACE10001590, BRACE20079530, BRAWH10001620, FEBRA20006800, KIDNE20003490, KIDNE20040540, KIDNE20050420, NT2NE10001850, STOMA20002890, SYNOV20001770, TESTI10000550, UTERU20004850. On the other hand, the clones whose expression levels were decreased owing to the presence of *Helicobacter pylori* were BRACE20034490, BRACE20077640, BRACE20083850, KIDNE20005170, LIVER20O00330, NT2RP60000390, NTONG10000980, UMVEN20001330.

[0151] These clones are involved in gastritis or gastroduodenal ulcer.

[0152] For example, if the polypeptide encoded by the cDNA of the present invention is a regulatory factor of cellular conditions such as growth and differentiation, it can be used for developing medicines as follows. The polypeptide or antibody provided by the invention is injected into a certain kind of cells by microinjection. Then, using the cells, it is possible to screen low molecular weight compounds, etc. by measuring the change in the cellular conditions, or the activation or inhibition of a particular gene. The screening can be performed as follows.

[0153] First, the polypeptide is expressed and purified as recombinant. The purified polypeptide is microinjected into cells such as various cell lines, or primary culture cells, and the cellular change such as growth and differentiation can be examined. Alternatively, the induction of genes whose expression is known to be involved in a particular change of cellular conditions may be detected by the amount of mRNA or polypeptide. Alternatively, the amount of intracellular molecules (low molecular weight compounds, etc.) that is changed by the function of the gene product (polypeptide) which is known to be involved in a particular change of cellular conditions may be detected. The compounds to be screened (both low and high molecular compounds are acceptable) can be added to the culture media and assessed for their activity by measuring the change of the cellular conditions.

[0154] Instead of microinjection, cell lines introduced with the gene obtained in the invention can be used for the screening. If the gene product is turn out to be involved in a particular change in the cellular conditions, the change of the product can be used as a measurement for screening. Once a compound is screened out which can activate or inhibit the function of the polypeptide of the invention, it can be applied for developing medicines.

[0155] If the polypeptide encoded by the cDNA of the present invention is a secretory protein, membrane protein, or protein involved in signal transduction, glycoprotein, transcription, or diseases, it can be used in functional assays for developing medicines.

[0156] In case of a membrane protein, it is most likely to be a polypeptide that functions as a receptor or ligand on the cell surface. Therefore, it is possible to reveal a new relationship between a ligand and receptor by screening the membrane protein of the invention based on the binding activity with the known ligand or receptor. Screening can be performed according to the known methods.

[0157] For example, a ligand against the polypeptide of the invention can be screened in the following manner. Namely, a ligand that binds to a specific polypeptide can be screened by a method comprising the steps of: (a) contacting a test sample with the polypeptide of the invention or a partial peptide thereof, or cells expressing these, and (b) selecting a test sample that binds to said polypeptide, said partial peptide, or said cells.

[0158] On the other hand, for example, screening using cells expressing the polypeptide of the present invention that is a receptor protein can also be performed as follows. It is possible to screen receptors that is capable of binding to a specific polypeptide by using procedures (a) attaching the sample cells to the polypeptide of the invention or its partial peptide, and (b) selecting cells that can bind to the said polypeptide or its partial peptide.

[0159] In a following screening as an example, first the polypeptide of the invention is expressed, and the recombinant polypeptide is purified. Next, the purified polypeptide is labeled, binding assay is performed using a various cell lines or primary cultured cells, and cells that are expressing a receptor are selected (Growth and differentiation factors and their receptors, Shin-Seikagaku Jikken Kouza Vol.7 (1991) Honjyo, Arai, Taniguchi, and Muramatsu edit, p203-236, Tokyo-Kagaku-Doujin). A polypeptide of the invention can be labeled with RI such as <sup>125</sup>I, and enzyme (alkaline phosphatase etc.).

[0160] Alternatively, a polypeptide of the invention may be used without labeling and then detected by using a labeled

antibody against the polypeptide. The cells that are selected by the above screening methods, which express a receptor of the polypeptide of the invention, can be used for the further screening of an agonists or antagonists of the said receptor.

[0161] Once the ligand binding to the polypeptide of the invention, the receptor of the polypeptide of the invention or the cells expressing the receptor are obtained by screening, it is possible to screen a compound that binds to the ligand and receptor. Also it is possible to screen a compound that can inhibit both bindings (agonists or antagonists of the receptor, for example) by utilizing the binding activities.

[0162] When the polypeptide of the invention is a receptor, the screening method comprises the steps of (a) contacting the polypeptide of the invention or cells expressing the polypeptide of the invention with the ligand, in the presence of a test sample, (b) detecting the binding activity between said polypeptide or cells expressing said polypeptide and the ligand, and (c) selecting a compound that reduces said binding activity when compared to the activity in the absence of the test sample. Furthermore, when the polypeptide of the invention is a ligand, the screening method comprises the steps of (a) contacting the polypeptide of the invention with its receptor or cells expressing the receptor in the presence of samples, (b) detecting the binding activity between the polypeptide and its receptor or the cells expressing the receptor, and (c) selecting a compound that can potentially reduce the binding activity compared to the activity in the absence of the sample.

[0163] Samples to screen include cell extracts, expressed products from a gene library, synthesized low molecular compound, synthesized peptide, and natural compounds, for example, but are not construed to be listed here. A compound that is isolated by the above screening using a binding activity of the polypeptide of the invention can also be used as a sample.

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[0164] A compound isolated by the screening may be a candidate to be an agonist or an antagonist of the receptor of the polypeptide. By utilizing an assay that monitors a change in the intracellular signaling such as phosphorylation which results from reduction of the binding between the polypeptide and its receptor, it is possible to identify whether the obtained compound is an agonist or antagonist of the receptor. Also, the compound may be a candidate of a molecule that can inhibit the interaction between the polypeptide and its associated proteins (including a receptor) in vivo. Such compounds can be used for developing drugs for precaution or cures of a disease in which the polypeptide is involved.

[0165] Secretory proteins may regulate cellular conditions such as growth and differentiation. It is possible to find out a novel factor that regulates cellular conditions by adding the secretory protein of the invention to a certain kind of cell, and performing a screening by utilizing the cellular changes in growth or differentiation, or activation of a particular gene.

[0166] The screening can be performed, for example, as follows. First, the polypeptide of the invention is expressed and purified in a recombinant form. Then, the purified polypeptide is added to a various kind of cell lines or primary cultured cells, and the change in the cell growth and differentiation is monitored. The induction of a particular gene that is known to be involved in a certain cellular change is detected by the amounts of mRNA and polypeptide. Alternatively, the amount of an intracellular molecule (low-molecular-weight compounds, etc.) that is changed by the function of a gene product (polypeptide) that is known to function in a certain cellular change is used for the detection.

[0167] Once the screening reveals that the polypeptide of the invention can regulate cellular conditions or the functions, it is possible to apply the polypeptide as a pharmaceutical and diagnostic medicine for related diseases by itself or by altering a part of it into an appropriate composition.

[0168] As is above described for membrane proteins, the secretory protein provided by the invention may be used to explore a novel ligand-receptor interaction using a screening based on the binding activity to a known ligand or receptor. A similar method can be used to identify an agonist or antagonist. The resulting compounds obtained by the methods can be a candidate of a compound that can inhibit the interaction between the polypeptide of the invention and an interacting molecule (including a receptor). The compounds may be able to use as a preventive, therapeutic, and diagnostic medicine for the diseases, in which the polypeptide may play a certain role.

[0169] Proteins involved in signal transduction or transcription may be a factor that affects a certain polypeptide or gene in response to intracellular/extracellular stimuli. It is possible to find out a novel factor that can affect a polypeptide or gene by expressing the polypeptide provided by the invention in a certain types of cells, and performing a screening utilizing the activation of a certain intracellular polypeptide or gene.

[0170] The screening may be performed as follows. First, a transformed cell line expressing the polypeptide is obtained. Then, the transformed cell line and the untransformed original cell line are compared for the changes in the expression of a certain gene by detecting the amount of its mRNA or polypeptide. Alternatively, the amount of an intracellular molecule (low molecular weight compounds, etc.) that is changed by the function of a certain gene product (polypeptide) may be used for the detection. Furthermore, the change of the expression of a certain gene can be detected by introducing a fusion gene that comprises a regulatory region of the gene and a marker gene (luciferase, β-galactosidase, etc.) into a cell, expressing the polypeptide provided by the invention into the cell, and estimating the activity of a marker gene product (polypeptide).

[0171] If the polypeptide or gene of the invention is involved in diseases, it is possible to screen a gene or compound that can regulate its expression and/or activity either directly or indirectly by utilizing the polypeptide of the present invention.

[0172] For example, the polypeptide of the invention is expressed and purified as a recombinant polypeptide. Then, the polypeptide or gene that interacts with the polypeptide of the invention is purified, and screened based on the binding. Alternatively, the screening can be performed by adding with a compound of a candidate of the inhibitor added in advance and monitoring the change of binding activity. In another method, a transcription regulatory region locating in the 5'-upstream of the gene encoding the polypeptide of the invention that is capable of regulating the expression of other genes is obtained, and fused with a marker gene. The fusion is introduced into a cell, and the cell is added with compounds to explore a regulatory factor of the expression of the said gene.

[0173] The compound obtained by the screening can be used for developing pharmaceutical and diagnostic medicines for the diseases in which the polypeptide of the present invention is involved. Similarly, if the regulatory factor obtained in the screening is turn out to be a polypeptide, compounds that can newly affect the expression or activity of the polypeptide may be used as a medicine for the diseases in which the polypeptide of the invention is involved.

[0174] If the polypeptide of the invention has an enzymatic activity, regardless as to whether it is a secretory protein, membrane protein, or proteins involved in signal transduction, glycoprotein, transcription, or diseases, a screening may be performed by adding a compound to the polypeptide of the invention and monitoring the change of the compound. The enzymatic activity may also be utilized to screen a compound that can inhibit the activity of the polypeptide.

[0175] In a screening given as an example, the polypeptide of the invention is expressed and the recombinant polypeptide is purified. Then, compounds are contacted with the purified polypeptide, and the amount of the compound and the reaction products is examined. Alternatively, compounds that are candidates of an inhibitor are pretreated, then a compound (substrate) that can react with the purified polypeptide is added, and the amount of the substrate and the reaction products is examined.

[0176] The compounds obtained in the screening may be used as a medicine for diseases in which the polypeptide of the invention is involved. Also they can be applied for tests that examine whether the polypeptide of the invention functions normally *in vivo*.

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[0177] Whether the secretory protein, membrane protein, signal transduction-related protein, glycoprotein-related protein, or transcription-related protein of the present invention is a novel protein involved in diseases or not is determined in another method than described above, by obtaining a specific antibody against the polypeptide of the invention, and examining the relationship between the expression or activity of the polypeptide and a certain disease. In an alternative way, it may be analyzed referred to the methods in "Molecular Diagnosis of Genetic Diseases" (Elles R. edit, (1996) in the series of "Method in Molecular Biology" (Humana Press).

[0178] Proteins involved in diseases are targets of screening as mentioned, and thus are very useful in developing drugs which regulate their expression and activity. Also, the proteins are useful in the medicinal industry as a diagnostic marker of the related disease or a target of gene therapy.

[0179] Compounds isolated as mentioned above can be administered patients as it is, or after formulated into a pharmaceutical composition according to the known methods. For example, a pharmaceutically acceptable carrier or vehicle, specifically sterilized water, saline, plant oil, emulsifier, or suspending agent can be mixed with the compounds appropriately. The pharmaceutical compositions can be administered to patients by a method known to those skilled in the art, such as intraarterial, intravenous, or subcutaneous injections. The dosage may vary depending on the weight or age of a patient, or the method of administration, but those skilled in the art can choose an appropriate dosage properly. If the compound is encoded by polynucleotide, the polynucleotide can be cloned into a vector for gene therapy, and used for gene therapy. The dosage of the polynucleotide and the method of its administration may vary depending on the weight or age of a patient, or the symptoms, but those skilled in the art can choose properly.

[0180] The present invention further relates to databases comprising at least a sequence of polynucleotide and/or polypeptide, or a medium recorded in such databases, selected from the sequence data of the nucleotide and/or the amino acids indicated in Table 1. The term "database" means a set of accumulated information as machine-searchable and readable information of nucleotide sequence. The databases of the present invention comprise at least one of the novel nucleotide sequences of polynucleotides provided by the present invention. The databases of the present invention can consist of only the sequence data of the novel polynucleotides provided by the present invention or can comprise other information on nucleotide sequences of known full-length cDNAs or ESTs. The databases of the present invention can be comprised of not only the information on the nucleotide sequences but also the information on the gene functions revealed by the present invention. Additional information such as names of DNA clones carrying the full-length cDNAs can be recorded or linked together with the sequence data in the databases.

[0181] The database of the present invention is useful for gaining complete gene sequence information from partial sequence information of a gene of interest. The database of the present invention comprises nucleotide sequence information of full-length cDNAs. Consequently, by comparing the information in this database with the nucleotide sequence of a partial gene fragment yielded by differential display method or subtraction method, the information on

the full-length nucleotide sequence of interest can be gained from the sequence of the partial fragment as a starting clue. [0182] The sequence information of the full-length cDNAs constituting the database of the present invention contains not only the information on the complete sequences but also extra information on expression frequency of the genes as well as homology of the genes to known genes and known polypeptides. Thus the extra information facilitates rapid functional analyses of partial gene fragments. Further, the information on human genes is accumulated in the database of the present invention, and therefore, the database is useful for isolating a human homologue of a gene originating from other species. The human homologue can be isolated based on the nucleotide sequence of the gene from the original species.

[0183] At present, information on a wide variety of gene fragments can be obtained by differential display method and subtraction method. In general, these gene fragments are utilized as tools for isolating the full-length sequences thereof. When the gene fragment corresponds to an already-known gene, the full-length sequence is easily obtained by comparing the partial sequence with the information in known databases. However, when there exists no information corresponding to the partial sequence of interest in the known databases, cDNA cloning should be carried out for the full-length cDNA. It is often difficult to obtain the full-length nucleotide sequence using the partial sequence information as an initial clue. If the full-length of the gene is not available, the amino acid sequence of the polypeptide encoded by the gene remains unidentified. Thus the database of the present invention can contribute to the identification of full-length cDNAs corresponding to gene fragments, which cannot be revealed by using databases of known genes.

**[0184]** The present invention has provided 1639 polynucleotides. As has not yet proceeded the isolation of full-length cDNA within the human, the invention has great significance. It is known that secretory proteins, membrane proteins, signal transduction-related proteins, glycoprotein-related proteins, transcription-related proteins, and so on are involved in many diseases. The genes and proteins involved in diseases are useful for developing a diagnostic marker or medicines for regulation of their expression and activity, or as a target of gene therapy.

[0185] In particular, cDNA assumed to encode secretory proteins, which were provided by this invention, are very important for the industry since the encoded proteins themselves are expected to be useful as pharmaceutical agents and many disease-related genes may be included in them. In addition, membrane proteins, signal transduction-related proteins, transcription-related proteins, disease-related proteins, and genes encoding them can be used as indicators for diseases, etc. These cDNA are also very important for the industry, which are expected to regulate the activity or expression of the encoded protein to treat diseases, etc.

[0186] Any patents, patent applications, and publications cited herein are incorporated by reference.

[0187] The invention is illustrated more specifically with reference to the following examples, but is not to be construed as being limited thereto.

# EXAMPLE 1

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- 35 Preparation of cDNA library by oligo-capping
  - (1) Extraction and purchase of mRNA

[0188] Total RNAs as mRNA sources were extracted from human tissues (shown below) by the method as described in the reference (J. Sambrook, E. F. Fritsch & T. Maniatis, Molecular Cloning Second edition, Cold Spring harbor Laboratory Press, 1989). Further, by the method as described in the reference (J. Sambrook, E. F. Fritsch & T. Maniatis, Molecular Cloning Second edition, Cold Spring harbor Laboratory Press, 1989), total RNAs as mRNA sources were extracted from human culture cells and human primary culture cells (shown below) which had been cultivated by the methods described in the catalogs.

[0189] The library names and the origins are indicated below in the order of "Library name: Origin". When a library was prepared by the subtraction method, the item is followed by a description of how to prepare the subtracted library.

<Extraction of mRNA from human tissues>

50 NTONG: Normal tongue;

CTONG: Tongue cancer; FCBBF: Fetal brain;

OCBBF: Fetal brain; PLACE: Placenta;

SYNOV: Synovial membrane tissue (from rheumatioid arthritis).

<Extraction of mRNA from culture cells>

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BNGH4: H4 cells (ATCC #HTB-148):
             IMR32: IMR32 cells (ATCC #CCL-127);
             SKNMC: SK-N-MC cells (ATCC #HTB-10):
             3NB69: NB69 cells (RCB #RCB0480);
5
             BGGI1: GI1 cells (RCB #RCB0763);
             NB9N4: NB9 cells (RCB #RCB0477);
             SKNSH: SK-N-SH cells (RCB #RCB0426);
             NT2RM: NT2 cells (STARATAGENE #204101);
             NT2RP: NT2 cells treated with retinoic acid (RA) for 5 weeks to induce the differentiation;
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             NT2RI: NT2 cells treated with RA for 5 weeks to induce the differentiation, followed by the treatment with the
             growth inhibitor for 2 weeks;
             NT2NE: NT2 cells were treated with RA and the growth inhibitor for the neuronal differentiation, and the re-
             sultant neurons were concentrated and harvested (NT2 Neuron);
             NTISM: NT2 cells (STARATAGENE #204101) were treated with RA for 5 weeks to induce the differentiation,
15
             and then treated with the growth inhibitor for 2 weeks; mRNA was prepared from the cells and a cDNA library
             was constructed from the mRNA; the cDNAs of the library whose nucleotide sequences were shared by those
             of mRNAs from undifferentiated NT2 cells were subtracted by using a Subtract Kit (Invitrogen #K4320-01);
             the subtracted library (NT2RI-NT2RM) was provided by this procedure.
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               RCB indicates that the cell was provided by the Cell Bank, RIKEN GENE BANK, The Institute of Physical
         and Chemical Research; ATCC indicates that the cell was provided by American Type Culture Collection.
          <Extraction of mRNA from primary culture cells>
             ASTRO: Normal human astrocyte NHA5732, Takara Shuzo #CC2565;
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             DFNES: Normal human dermal fibroblast (neonatal skin); NHDF-Neo NHDF2564, Takara Shuzo #CC2509;
             MESAN: Normal human mesangial cell NHMC56046-2, Takara Shuzo #CC2559:
             NHNPC: Normal human neural progenitor cell NHNP5958, Takara Shuzo #CC2599;
             PEBLM: Normal human peripheral blood mononuclear cell HPBMC5939. Takara Shuzo #CC2702:
             HSYRA: Human synoviocyte HS-RA (from rheumatioid arthritis), Toyobo #T404K-05;
30
             PUAEN: Normal human pulmonary artery endothelial cells, Toyobo #T302K-05;
             UMVEN: Normal human umbilical vein endothelial cell HUVEC, Toyobo #T200K-05;
             HCASM: Normal human coronary artery smooth muscle cell HCASMC, Toyobo #T305K-05;
             HCHON: Normal human chondrocyte HC, Toyobo #T402K-05;
             HHDPC: Normal human dermal papilla cell HDPC, Toyobo #THPCK-001;
35
             CD34C: CD34+ cells (AllCells, LLC #CB14435M);
             D3OST: CD34+ cells treated with the osteoclast differentiation factor (ODF) for 3 days to induce the differen-
             D6OST: CD34+ cells treated with ODF for 6 days to induce the differentiation;
             D9OST: CD34+ cells treated with ODF for 9 days to induce the differentiation.
40
     [0190] Then, total RNAs extracted from the following human tissues were purchased and used as mRNA sources.
     The library names and the origins are indicated below in the order of "Library name: Origin". When a library was
      prepared by the subtraction method, the item is followed by a description of how to prepare the subtracted library.
45
         <Purchase of total RNA containing mRNA extracted from human tissues>
             ADRGL: Adrenal gland, CLONTECH #64016-1;
             BRACE: Brain (cerebellum), CLONTECH #64035-1;
             BRAWH: Whole brain, CLONTECH #64020-1:
50
             FEBRA: Fetal brain, CLONTECH #64019-1;
             FELIV: Fetal liver, CLONTECH #64018-1;
             HEART: Heart, CLONTECH #64025-1;
             HLUNG: Lung, CLONTECH #64023-1;
             KIDNE: Kidney, CLONTECH #64030-1;
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             LIVER: Liver, CLONTECH #64022-1;
             MAMGL: Mammary Gland, CLONTECH #64037-1;
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PANCR: Pancreas, CLONTECH #64031-1; PROST: Prostate, CLONTECH #64038-1;

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SALGL: Salivary Gland, CLONTECH #64026-1;
            SKMUS: Skeletal Muscle, CLONTECH #64033-1;
            SMINT: Small Intestine, CLONTECH #64039-1;
            SPLEN: Spleen, CLONTECH #64034-1;
5
            STOMA: Stomach, CLONTECH #64090-1;
            TBAES: Breast (Tumor), CLONTECH #64015-1;
            TCERX: Cervix (Tumor), CLONTECH #64010-1;
            TCOLN: Colon (Tumor), CLONTECH #64014-1;
            TESTI: Testis, CLONTECH #64027-1;
10
            THYMU: Thymus, CLONTECH #64028-1;
            TLUNG: Lung (Tumor), CLONTECH #64013-1;
            TOVAR: Ovary (Tumor), CLONTECH #64011-1;
            TRACH: Trachea, CLONTECH #64091-1;
            TUTER: Uterus (Tumor), CLONTECH #64008-1;
15
            UTERU: Uterus, CLONTECH #64029-1;
            ADIPS: Adipose, Invitrogen #D6005-01:
            BLADE: Bladder, Invitrogen #D6020-01;
            BRALZ: Cerebral cortex from an Alzheimer patient (Brain, cortex, Alzheimer), Invitrogen #D6830-01;
            CERVX: Cervix, Invitrogen #D6047-01;
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            COLON: Colon, Invitrogen #D6050-0;
            NESOP: Esophagus, Invitrogen #D6060-01;
            PERIC: Pericardium, Invitrogen #D6105-01;
            RECTM: Rectum, Invitrogen #D6110-01;
            TESOP: Esophageal (Tumor), Invitrogen #D6860-01;
25
            TKIDN: Kidney (Tumor), Invitrogen #D6870-01;
            TLIVE: Liver (Tumor), Invitrogen #D6880-01;
            TSTOM: Stomach (Tumor), Invitrogen #D6920-01;
            BEAST: Adult breast, STARATAGENE #735044;
            FEHRT: Fetal heart, STARATAGENE #738012;
30
            FEKID: Fetal kidney, STARATAGENE #738014;
            FELNG: Fetal lung, STARATAGENE #738020;
            NOVAR: Adult ovary, STARATAGENE #735260;
            BRASW: subtracted library (BRALZ-BRAWH).
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- 35 [0191] A cDNA library was constructed from mRNA prepared from tissues of cerebral cortex obtained from an Alzheimer patient [BRALZ: Cerebral cortex from an Alzheimer patient (Brain, cortex, Alzheimer), Invitrogen #D6830-01]; the cDNAs of this library whose nucleotide sequences were shared by those of mRNAs from whole brain tissue [BRAWH: Whole brain, CLONTECH #64020-1] were subtracted by using a Subtract Kit (Invitrogen #K4320-01).
  - [0192] Further, mRNAs extracted and purified as poly A(+) RNAs from the human tissues shown below were purchased. A cDNA library was prepared from an RNA mixture in which the poly A(+) RNA from each tissue had been combined with poly A(-) RNA. The poly A(-) RNA was prepared by removing poly A(+) RNA from the total RNA of whole brain tissue (CLONTECH #64020-1) by using oligo dT cellulose. The library names and the origins are indicated below in the order of "Library name: Origin".
- 45 <Purchase of mRNAs of human tissues as poly A(+) RNAs>

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BRAMY: Brain (amygdala), CLONTECH #6574-1;
BRCAN: Brain (caudate nucleus), CLONTECH #6575-1;
BRCOC: Brain (corpus callosum), CLONTECH #6577-1;
BRHIP: Brain (hippocampus), CLONTECH #6578-1;
BRSSN: Brain (substantia nigra), CLONTECH #6580-1;
BRSTN: Brain (subthalamic nucleus), CLONTECH #6581-1;
BRTHA: Brain (thalamus), CLONTECH #6582-1.
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# 55 (2) Preparation of cDNA library

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[0193] cDNA library was prepared from each RNA by the improved method (WO 01/04286) of oligo capping [M. Maruyama and S. Sugano, Gene, 138: 171-174 (1994)]. A series of procedures, BAP (Bacterial Alkaline Phosphatase)

treatment, TAP (Tobacco Acid Pyrophosphatase) treatment, RNA ligation, first strand cDNA synthesis and RNA removal, were carried out using the oligo-cap linker (SEQ ID NO: 3279) and oligo dT primer (SEQ ID NO: 3280), as described in WO 01/04286. Then, the single-stranded cDNA was converted to a double-stranded cDNA by PCR (polymerase chain reaction) using 5' (SEQ ID NO: 3281) and 3' (SEQ ID NO: 3282) PCR primers, and then digested with *Sfi*I. Then, a fraction of cDNA fragments, typically 2-kb or longer (3-kb or longer in some cases), was unidirectionally cloned into a *DrallI*-digested pME18SFL3 vector (Figure 1) (GenBank AB009864, Expression vector); the cDNA library was thus prepared.

[0194] The names of cDNA libraries, which were used in the analysis of full-length cDNA sequences, and their origins are shown in Table 2.

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# Table 2

	Library	Туре	Origin, etc.
15	3NB69	Culture cell	NB69 cells (RCB #RCB0480)
	ADRGL	Tissue	Adrenal gland (CLONTECH #64016-1)
	ASTRO	Primary culture cell	Normal Human Astrocyte NHA5732 (Takara Shuzo #CC2565)
	BGGI1	Culture cell	GI1 cells (RCB #RCB0763)
	BNGH4	Culture cell	H4 cells (ATCC #HTB-148)
	BRACE	Tissue	Brain, cerebellum (CLONTECH #64035-1)
	BRAWH	Tissue	Brain, whole (CLONTECH #64020-1)
	CD34C	Primary culture cell	CD34+ cells (AllCells, LLC #CB14435M)
25	CTONG	Tissue	Tongue, Cancer
	D3OST	Primary culture cell	CD34+ cells (ODF induction for 3 days)
30	DFNES	Primary culture cell	Normal Human Dermal Fibroblasts (Neonatal Skin); NHDF-Neo NHDF2564 (Takara Shuzo #CC2509)
	FCBBF	Tissue	Brain, Fetal
	FEBRA	Tissue	Brain, Fetal (CLONTECH #64019-1)
	HCASM	Primary culture cell	Human coronary artery smooth muscle cells HCASMC (Toyobo #T305K-05)
35	HEART	Tissue	Heart (CLONTECH #64025-1)
	HHDPC	Primary culture cell	Human dermal papilla cells HDPC (Toyobo #THPCK-001)
	HLUNG	Tissue	Lung (CLONTECH #64023-1)
40	HSYRA	Primary culture cell	Human synoviocytes from rheumatioid arthritis HS-RA(Toyobo #T404K-05)
40	IMR32	Culture cell	IMR32 cells (ATCC #CCL-127)
	KIDNE	Tissue	Kidney (CLONTECH #64030-1)
	LIVER	Tissue	Liver (CLONTECH #64022-1)
45	MAMGL	Tissue	Mammary Gland (CLONTECH #64037-1)
	MESAN	Primary culture cell	Normal human mesarigial cells NHMC56046-2 (Takara Shuzo #CC2559)
50	NB9N4	Culture cell	NB9 cells (RCB #RCB0477)
	NESOP	Tissue	Esophagus (Invitrogen #D6060-01)
	NHNPC	Primary culture cell	Normal human neural progenitor cells NHNP5958 (Takara Shuzo #CC2599)
	NT2NE	Culture cell	NT2 cells concentrated after differentiation (NT2 Neuron)
	NT2RI	Culture cell	NT2 cells treated by growth inhibitor for 2 weeks after RA induction for 5 weeks
55	NT2RP	Culture cell	NT2 cells treated by RA for 5 weeks
	NTONG	Tissue	Tongue

Table 2 (continued)

	Library	Туре	Origin, etc.
5	OCBBF	Tissue	Brain, Fetal
	PANCR	Tissue	Pancreas (CLONTECH #64031-1)
	PEBLM	Primary culture cell	Human peripheral blood mononuclear cells HPBMC5939 (Takara Shuzo #CC2702)
10	PLACE	Tissue	Placenta
	PROST	Tissue	Prostate (CLONTECH #64038-1)
	PUAEN	Primary culture cell	Human pulmonary artery endothelial cells (Toyobo #T302K-05)
	SALGL	Tissue	Salivary Gland (CLONTECH #64026-1)
15	SKMUS	Tissue	Skeletal Muscle (CLONTECH #64033-1)
	SKNMC	Culture cell	SK-N-MC cells (ATCC #HTB-10)
20	SKNSH	Culture cell	SK-N-SH cells (RCB #RCB0426)
	SMINT	Tissue	Small Intestine (CLONTECH #64039-1)
	SPLEN	Tissue	Spleen (CLONTECH #64034-1)
	STOMA	Tissue	Stomach (CLONTECH #64090-1)
	SYNOV	Tissue	Synovial membrane tissue from rheumatioid arthritis
	TESTI	Tissue	Testis (CLONTECH #64027-1)
	THYMU	Tissue	Thymus (CLONTECH #64028-1)
	TRACH	Tissue	Trachea (CLONTECH #64091-1)
30	UMVEN	Primary culture cell	Human umbilical vein endothelial cells HUVEC (Toyobo #T200K-05)
	UTERU	Tissue	Uterus (CLONTECH #64021-1)

[0195] The cDNA library with the high fullness ratio (the fullness ratio of 5'-end, which was calculated for each cDNA library by using the protein coding region found in known mRNA species as an index, was 90% in average) prepared by the improved oligo-capping method was constructed by using a eukaryotic expression vector pME18SFL3. The vector contains SR  $\alpha$  promoter and SV40 small t intron in the upstream of the cloning site, and SV40 polyA added signal sequence site in the downstream. As the cloning site of pME18SFL3 has asymmetrical Dralll sites, and the ends of cDNA fragments contain Sfil sites complementary to the DrallI sites, the cloned cDNA fragments can be inserted into the downstream of the SR  $\alpha$  promoter unidirectionally. Therefore, clones containing full-length cDNA can be expressed transiently by introducing the obtained plasmid directly into COS cells, etc. Thus, the clones can be analyzed very easily in terms of the proteins that are the gene products of the clones, or in terms of the biological activities of the proteins.

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(3) Assessment of the 5'-end completeness of clones derived from the cDNA library prepared by oligo-capping

[0196] With respect to the plasmid DNAs of clones derived from the libraries, the nucleotide sequences of cDNA 5'-ends (3'-ends as well in some cases) were determined in a DNA sequencer (ABI PRISM 3700, PE Biosystems), after sequencing reaction was conducted by using a DNA sequencing reagent (BigDye Terminator Cycle Sequencing FS Ready Reaction Kit, PE Biosystems) according to the manual. A database was constructed based on the obtained data. [0197] The 5'-end completeness of about 770,000 clones derived from the human cDNA libraries prepared by the improved oligo-capping method was determined by the following method. The clones whose 5'-end sequences were consistent with those of known human mRNA in the public database were judged to be "full-length" if they had a longer 5'-end sequence than that of the known human mRNA; or even though the 5'-end sequence was shorter, if it contained the translation initiation codon it was judged to have the "full-length" sequence. Clones which did not contain the translation initiation codon were judged to be "not-full-length". The fullness ratio ((the number of full-length clones)/(the number of full-length and not-full-length clones)) at the 5'-end of the cDNA clones was determined by comparing with known human mRNA. As a result, the fullness ratio of the 5'-ends was 90%. The result indicates that the fullness ratio

at the 5'-end sequence was extremely high in the human cDNA clones obtained by the oligo-capping method.

#### **EXAMPLE 2**

# 5 Sequencing analysis of cDNA ends and selection of full-length clones

[0198] With respect to the plasmid DNAs of clones obtained from each cDNA library, the 5'-end nucleotide sequences of the cDNAs were determined in a DNA sequencer (ABI PRISM 3700, PE Biosystems), after sequencing reaction was conducted by using a DNA sequencing reagent (Dye Terminator Cycle Sequencing FS Ready Reaction Kit, dRhodamine Terminator Cycle Sequencing FS Ready Reaction Kit or BigDye Terminator Cycle Sequencing FS Ready Reaction Kit, PE Biosystems) according to the manual. A database was constructed using the data obtained.

[0199] For the analyzed 5'-end sequences of cDNA clones, the data with the annotation of "complete cds" in the GenBank and UniGene were searched by BLAST homology search. When identical to certain human mRNA sequences, such cDNA clones were excluded. Then, clustering was carried out. When the identity was 90% or higher, and the length of consensus sequence was 50 base pairs or longer, the cDNA clones were assumed to belong to an identical cluster, and thus clustered. cDNA clones longer in the 5' direction were selected from the members belonging to a cluster; if required, the 3'-end sequences of the selected clones were determined by the same analysis method as used to determine the 5'-end sequences. The data of the end sequences obtained were analyzed, and then the clones forming a sequence contig at 5'- and 3'-ends were excluded. Further, as mentioned above, the data was analyzed again by BLAST homology search; when identical to certain human mRNA sequences (including sequences patented and applied for), the cDNA clones were excluded. Thus, the cDNAs clones to be analyzed for their nucleotide sequence were obtained.

# **EXAMPLE 3**

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# Analysis of the full-length nucleotide sequences

[0200] The full-length nucleotide sequences of the selected clones were determined. The nucleotide sequence determination was mainly performed by primer walking method comprising the dideoxy terminator method using custom-made synthetic DNA primers. Namely, the nucleotide sequences of the DNAs were determined in a sequencer from PE Biosystems, after sequencing reaction was carried out with a DNA sequencing reagent from the same supplier using the custom-made synthetic DNA primers according to the manual. A part of the clones were analyzed with a DNA sequencer from Licor.

[0201] Further, the nucleotide sequences of a part of the clones were determined by the shotgun method where the plasmids containing the cDNAs were digested at random were used, instead of the use of custom-made primers, by the same method in the DNA sequencer. The full-length nucleotide sequences were finally determined by completely assembling the partial nucleotide sequences obtained by the above method.

[0202] Then, the regions translatable to proteins were deduced from the determined full-length nucleotide sequences, and thereby the amino acid sequences were determined. SEQ ID NOs corresponding to the respective sequences are shown in Table 1.

# **EXAMPLE 4**

# Functional prediction by homology search

[0203] For the determined nucleotide sequences, GenBank, SwissProt, UniGene, and nr were searched by BLAST. The clones exhibiting higher homology, which were convenient to predict their functions based on the nucleotide sequences and deduced amino acid sequences, were selected based on the BLAST search hit data whose P value or E value was 10<sup>-4</sup> or lower and for which the length of consensus sequence x homology = 30 or higher in the amino acid database search. Further, from them, representative clones were selected, which are shown as Homology Search Result Data in the last part herein. Accordingly, the data shown herein are merely the representative data, and the molecule exhibiting homology to each clone is not limited thereto. Further, with respect to a part of clones, the BLAST search hit data that did not meet the criteria as described above are not shown herein.

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## **EXAMPLE 5**

Search for signal sequence, transmembrane domain and other functional domains in the deduced amino acid sequences

[0204] With respect to the amino acid sequences deduced from the full-length nucleotide sequences, the prediction was made for the presence of signal sequence at the amino terminus, the presence of transmembrane domain, and the presence of functional protein domains (motifs). The signal sequence at the amino terminus was searched for by PSORT [K. Nakai & M. Kanehisa, Genomics, 14: 897-911 (1992)]; the transmembrane domain, by SOSUI [T. Hirokawa et al., Bioinformatics, 14: 378-379 (1998)] (Mitsui Knowledge Industry); the function domain, by Pfam (http://www.sanger.ac.uk/Software/Pfam/index.shtml). The amino acid sequence in which the signal sequence at the amino terminus or transmembrane domain had been predicted to be present by PSORT or SOSUI were assumed to be a secretory or membrane protein. Further, when the amino acid sequence hit a certain functional domain by the Pfam functional domain search, the protein function can be predicted based on the hit data, for example, by referring to the function categories on the PROSITE (http://www.expasy.ch/cgi-bin/prosite-list.pl). In addition, the functional domain search can also be carried out on the PROSITE.

[0205] The search results obtained with the respective programs are shown below.

[0206] The clones whose deduced amino acid sequences were detected to have the signal sequences by PSORT are as follows.

ADRGL10001600, BGGI120010970, BNGH410001180, BNGH410001370, BRACE10001690, BRACE20010650, BRACE20014920, BRACE20079530, BRACE20086550, BRACE20089600, BRAWH20004430, BRAWH20040950, BRAWH20052250, BRAWH20092610, CD34C20000510, CTONG20028160, FEBRA20003780, FEBRA20004150, FEBRA20006900, FEBRA20008090, FEBRA20012270, FEBRA20015840, FEBRA20020860, FEBRA20021910, FEBRA20037070, HHDPC20000950, HLUNG10000240, HLUNG20001250, HSYRA20003470, HSYRA20014200, IMR3210001580, IMR3220007750, IMR3220008590, KIDNE10001430, KIDNE20001670, KIDNE20003300, KIDNE20042620, KIDNE20054000, KIDNE20060530, KIDNE20066520, LIVER10005420, MAMGL10000320, NHNPC20002060, NT2NE10001630, NT2NE20016260, NT2NE20055170, NT2RI20009740, NT2RI20015400, NT2RI20030110, NT2RI20042840, NT2RI20053350, NT2RI20070840, NT2RI20073030, NT2RI20074980, NT2RI20078270, NT2RI20092890, NT2RP70015910, NT2RP70021510, NT2RP70029820, NT2RP70047900, NT2RP70074220, NT2RP70079250, NT2RP70091680, NT2RP70094290, NT2RP70094980, NT2RP70095070, NTONG10000980, NTONG10002140, NTONG10002570, OCBBF10000420, PANCR10000210, PLACE60020840, PLACE60026990, PLACE60043960, PLACE60049930, PLACE60050290, PROST10005260, PROST10005360, PROST20000360, PROST20029600, PROST20044160, PROST20054260, PROST20058800, SMINT10000160, SPLEN10000910, SPLEN20001340, STOMA20002570, TESTI20026320, TESTI20026980, TESTI20027070, TESTI20028660, TESTI20042870, TESTI20049940, THYMU10000830, UTERU10001920, UTERU20003930, UTERU20004850

[0207] The clones whose deduced amino acid sequences were detected to have the transmembrane domains by SOSUI are as follows. Numerals indicate the numbers of transmembrane domains detected in the deduced amino acid sequences. Of the search result, the clone name and the number of transmembrane domains are demarcated by a double slash mark (//).

3NB6910000180//4, 3NB6910000850//1, 3NB6920000290//2, 3NB6920003300//5, 3NB6920005450//2, ADRGL10000180//1, ADRGL10001600//1, ADRGL20003230//2, BGGI120010970//1, BNGH410000800//2, BNGH410001370//1, BNGH410001980//11, BRACE20017180//1, BRACE20010650//1, BRACE20011170//2, BRACE20013400//2, BRACE20013520//2, BRACE20014230//2, BRACE20014530//1,

BRACE20014920//1, BRACE20018590//1, BRACE20022270//1, BRACE20026850//1, BRACE20030780//3, BRACE20031100//10, BRACE20034490//2, BRACE20071380//3, BRACE20071970//1, BRACE20072810//2, BRACE20075020//1, BRACE20075380//3, BRACE20076410//1, BRACE20076850//1, BRACE20077610//2, BRACE20077640//2, BRACE20077980//1, BRACE20086550//1, BRACE20089600//1, BRACE20091880//1,

BRAWH1000010//1, BRAWH10000370//1, BRAWH10000940//1, BRAWH10001620//1, BRAWH10001800//1, BRAWH20004430//8, BRAWH20006970//1, BRAWH20011290//4, BRAWH20014380//2, BRAWH20015030//2, BRAWH20036930//1, BRAWH20038320//2, BRAWH20059980//1, BRAWH20087060//1, BRAWH20092610//3, CD34C20000510//1, CTONG20015330//1, CTONG20028160//2, CTONG20037820//1, CTONG20047160//4,

FCBBF10006180//3, FCBBF10006750//2, FCBBF20005910//1, FCBBF20009400//3, FCBBF20015380//5, FEBRA20004040//2, FEBRA20004150//3, FEBRA20004520//3, FEBRA20004910//2, FEBRA20006560//3, FEBRA20008800//1, FEBRA20010930//7, FEBRA20012450//3, FEBRA20012940//1, FEBRA20013510//2,

FEBRA20014870//1, FEBRA20015840//2, FEBRA20020860//2, FEBRA20021910//1, FEBRA20031550//2, FEBRA20041910//1, FEBRA20063150//1, FEBRA20066670//2, HCASM10000610//2, HCASM20002020//1, HEART20000990//1, HEART20004920//2, HHDPC20000950//2, HLUNG10000370//2, HLUNG20001160//1,

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HLUNG20001420//12, HLUNG20001760//2, HSYRA20003470//1,
                                                                   HSYRA20008280//1, HSYRA20011030//1,
     HSYRA20015800//2, IMR3210000440//1, IMR3210001580//2, IMR3210002660//6, IMR3220008590//1,
     IMR3220009840//2,
                          KIDNE10001040//1,
                                               KIDNE10001430//1,
                                                                   KIDNE20000700//1,
                                                                                         KIDNE20000850//1,
     KIDNE20001670//7,
                          KIDNE20003150//1,
                                               KIDNE20003300//7,
                                                                   KIDNE20003490//4,
                                                                                         KIDNE20004220//1,
     KIDNE20005170//7,
                          KIDNE20033050//2,
                                               KIDNE20033570//1,
                                                                   KIDNE20039410//5,
                                                                                         KIDNE20044110//3,
     KIDNE20048280//12, KIDNE20049810//2, KIDNE20054770//12, KIDNE20060530//2, KIDNE20060620//2,
     KIDNE20063530//1,
                          KIDNE20066520//2,
                                               KIDNE20067600//1,
                                                                   KIDNE20071860//1,
                                                                                        KIDNE20074220//1.
     KIDNE20075690//5.
                          LIVER10000580//3.
                                               LIVER10000670//1.
                                                                    LIVER10001040//2,
                                                                                         LIVER10001110//1,
     LIVER10001750//1,
                         LIVER20004160//1.
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                                                                  MAMGL10001840//2.
                                                                                       MESAN10001470//1,
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                          NT2NE20003920//1,
     NT2NE10001850//6,
                                              NT2NE20004550//1,
                                                                   NT2NE20004700//1,
                                                                                        NT2NE20005500//1,
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                                                                                        NT2NE20047160//1,
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                          NT2NE20057200//1,
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                                                                   NT2RI20014490//11,
                                                                                         NT2RI20016570//2,
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                                              NT2RI20051500//1,
                                                                   NT2RI20066820//1,
                                                                                        NT2RI20068250//11,
     NT2RI20070480//1,
                          NT2RI20077540//4,
                                               NT2RI20078790//1,
                                                                   NT2RI20081880//3.
                                                                                         NT2RI20085980//3,
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                                                                   NT2RP70004770//4.
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                          NT2RP70015910//2.
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                                                                   NT2RP70023790//2.
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                         NT2RP70047900//2,
                                              NT2RP70049250//1.
                                                                                        NT2RP70071540//2.
                                                                   NT2RP70064080//3.
     NT2RP70071770//13, NT2RP70072520//2, NT2RP70073810//3, NT2RP70075040//4, NT2RP70076170//2,
     NT2RP70079750//2,
                         NT2RP70081330//2,
                                             NT2RP70081370//8,
                                                                                       NT2RP70090120//10.
                                                                  NT2RP70085500//2.
     NT2RP70091490//3,
                         NT2RP70093220//11,
                                              NT2RP70093730//1,
                                                                  NT2RP70094290//1,
                                                                                       NT2RP70094810//12,
     NT2RP70094980//3,
                         NTONG10002570//2,
                                             NTONG20002650//4,
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                                                                                       NTONG20008000//1.
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     PLACE50001050//1,
                         PLACE60005550//2,
                                              PLACE60012810//2,
                                                                   PLACE60018860//7,
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     PLACE60020840//6,
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                                              PLACE60037450//1,
                                                                   PLACE60047380//1,
                                                                                        PLACE60049930//1,
     PLACE60050290//1,
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                                              PROST10002720//1,
                                                                   PROST10005360//1,
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                         PROST20054260//5,
                                              PROST20059190//3,
                                                                   PROST20059430//3,
                                                                                       PROST20069880//1,
     PROST20072370//1,
                         PUAEN10000570//1,
                                              PUAEN10001610//1,
                                                                   PUAEN10003220//1,
                                                                                       SKMUS20007740//1,
     SKNMC10000190//1,
                         SKNMC10000290//1,
                                              SKNMC10002290//2.
                                                                   SKNMC10002510//8.
                                                                                        SMINT10000160//2.
     SMINT10000420//8, SMINT10000570//2, SMINT10001180//1, SMINT20000180//2, SMINT20002770//3,
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                         SPLEN20002430//1,
                                              SPLEN20002700//1.
                                                                   SPLEN20003100//1,
                                                                                        SPLEN20004960//2.
                         STOMA10001170//1,
     STOMA10000520//2,
                                              STOMA20000320//1,
                                                                  STOMA20002570//3,
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                          TESTI10000960//1,
                                               TESTI20006000//1,
                                                                   TESTI20009090//1,
                                                                                         TESTI20009700//7.
     TESTI20011340//5, TESTI20012370//1, TESTI20013520//4, TESTI20014200//9, TESTI20016210//2,
     TESTI20016710//1,
                         TESTI20018620//2,
                                              TEST120020020//2,
                                                                   TESTI20020810//8,
                                                                                         TESTI20022510//3,
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     TESTI20024670//2,
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                          TESTI20025800//2,
                                                                   TESTI20027000//1,
                                                                                         TESTI20030370//1.
     TESTI20031930//1.
                          TESTI20042870//3.
                                              TESTI20047120//5,
                                                                   TESTI20049940//2.
                                                                                         TESTI20057420//1,
     TESTI20058600//6, TESTI20067740//2, TESTI20069780//3, TESTI20074800//5, TESTI20077490//4,
     TESTI20079510//3,
                          TESTI20080200//7,
                                               TESTI20081440//1,
                                                                   TESTI20087740//2,
                                                                                         TESTI20088470//2.
     TESTI20136910//1,
                        THYMU10001760//1.
                                             THYMU10003290//1.
                                                                  THYMU10003820//4.
                                                                                       THYMU10005580//4.
     TRACH10000630//3.
                         TRACH10001000//1. TRACH10001400//1.
                                                                  TRACH20001850//2.
                                                                                       TRACH20001960//2.
     TRACH20004960//2, TRACH20006650//11, TRACH20007670//2, TRACH20008980//2, TRACH20015920//2,
     UMVEN20001330//2, UTERU10000770//2
     [0208] The Names of clones whose deduced amino acid sequences were detected to have functional domains with
     Pfam, and the name of hit functional domains are as follows. The search result is indicated as "clone name//functional
     domain name". When the clone has multiple hit functional domains, they are listed and demarcated by a double slash
     mark (//). When the clone has multiple hits of an identical functional domain, each is listed without abridgment.
     3NB6910000180//TS-N domain//UBA domain
     3NB6910001160//START domain
     3NB6910001290//KRAB box
     3NB6910001730//RI01/ZK632.3/MJ0444 family
     3NB6920002810//DEAD/DEAH box helicase//Helicases conserved C-terminal domain 3NB6920009120//Zinc finger,
     C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Frataxin-like domain
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3NB6920010020//Regulator of G protein signaling domain

3NB6920014330//Domain of unknown function

3NB6920014710//DNA binding domain with preference for A/T rich regions//Zinc finger, C2H2 type

3NB6920015110//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)

5 3NB6920015570//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//

ADRGL10000020//BTB/POZ domain//Kelch motif//Kelch motif

ADRGL10000650//Zinc finger, C2H2 type//Zinc finger, C2

ADRGL10001600//Cytochrome P450//Cytochrome P450 ADRGL10001650//Urease//Chlorohydrolase//Dihydroorota-se-like

ADRGL20000740//Dockerin domain type I//RhoGAP domain

ASTR010000180//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain,

15 G-beta repeat

ASTR020000950//SNAP-25 family

ASTR020004170//Ribonuclease T2 family

BGGI120005330//IMP dehydrogenase / GMP reductase N terminus//CBS domain//CBS domain//Dihydroorotate dehydrogenase//Histidine biosynthesis protein//FMN-dependent dehydrogenase//Conserved region in glutamate syn-

20 thase//IMP dehydrogenase / GMP reductase C terminus

BGGI120005440//Importin beta binding domain

BGGI120006840//Sir2 family

BGGI120006930//Gollagen triple helix repeat (20 copies)//SAM domain (Sterile alpha motif)

BGGI120010970//F5/8 type C domain//Laminin G domain//Laminin G

domain//Fibrinogen beta and gamma chains, C-terminal globular domain

BGGI120017140//KRAB box//Zinc finger, C2H2 type//Zinc 
BNGH410000340//Prolyl oligopeptidase family//Phospholipase/Carboxytesterase

30 BNGH410001040//Eukaryotic protein kinase domain

BNGH410001180//Low-density lipoprotein receptor domain class A//Low-density lipoprotein receptor domain class A//Low-density lipoprotein receptor domain class A//WAP-type (Whey Acidic Protein) 'four-disulfide core'//Low-density lipoprotein receptor domain class A//Low-density lipop

35 A domain//Low-density lipoprotein receptor repeat class B//Low-density lipoprotein receptor repeat class B

BNGH410001370//Filamin/ABP280 repeat.

BNGH410001770//IMP dehydrogenase / GMP reductase N terminus//CBS domain//CBS domain//Dihydroorotate dehydrogenase//Histidine biosynthesis protein//FMN-dependent dehydrogenase//Conserved region in glutamate synthase//IMP dehydrogenase / GMP reductase C terminus

BNGH410001900//Viral (Superfamily 1) RNA helicase

BNGH410001980//POT family//Bacteriorhodopsin//Sugar (and other) transporter

BNGH420005320//SCAN domain//KRAB box//Zinc finger, C2H2 type//GATA zinc finger//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Transcription factor S-II (TFIIS)//Zinc finger, C2H2

BRACE10000420//Fatty acid desaturase//Protein phosphatase 2C

BRACE10000930//Zinc finger, C3HC4 type (RING finger)//TRAF-type zinc finger//TRAF-type zinc finger//MATH domain

50 BRACE10001150//DNA gyrase/topoisomerase IV, subunit A//Nucleosome assembly protein (NAP)

BRACE10001660//Zinc finger, C2H2 type

BRACE20002800//IQ calmodulin-binding motif

BRACE20005650//ATP synthase ab C terminal

BRACE20006980//Ank repeat//Ank repeat//Ank repeat//Ank repeat//Ank repeat//Ank repeat/

BRAGE20007180//Calcitonin / CGRP / IAPP family

BRACE20008850//Zinc finger, C3HC4 type (RING finger)

BRACE20010650//F-box domain.

BRACE20013750//Hepatitis C virus non-structural protein NS4a

BRACE20014920//Protein-tyrosine phosphatase

BRACE20018550//Ank repeat//Ank repeat//Ank repeat//Ank repeat//Ank repeat/

BRACE20018590//Transmembrane 4 family

BRACE20019440//Protein of unknown function DUF82

5 BRACE20020910//Zinc finger, C3HC4 type (RING finger)//Zinc finger, C3HC4 type (RING finger)//E7 protein. Early protein//B-box zinc finger.

BRACE20022020//Eukaryotic protein kinase domain

BRACE20024090//Homeobox domain

BRACE20024680//Similarity to lectin domain of ricin beta-chain, 3 copies.

10 BRACE20026850//short chain dehydrogenase

BRACE20027720//Metallo-beta-lactamase superfamily

BRACE20027920//FGGY family of carbohydrate kinases

BRACE20028120//Ras family//ADP-ribosylation factor family

BRACE20031100//Domain of unknown function DUF20//Patched family

BRACE20071740//KRAB box//Zinc finger, C2H2 type//Transcription factor S-II (TFIIS)//Zinc finger, C2H2 type//-Zinc finger, C2H2 type//Zinc finger, C

20 BRACE20074470//Cadherin domain//Cadherin domain//Glutathione peroxidases//Cadherin domain

BRACE20076410//Sushi domain (SCR repeat)//Sushi domain (SCR repeat)//Sushi domain (SCR repeat)

BRACE20076630//PH domain

BRACE20080970//Phosphofructokinase

BRACE20083800//Fibronectin type III domain

25 BRACE20083850//bZIP transcription factor//Homeobox associated leucine zipper BRACE20084430//Thioredoxin// Thioredoxin

BRACE20092120//3'-5' exonuclease//Adenylylsulfate kinase//Protein of unknown function DUF82

BRACE20093610//Bacterial type II secretion system protein

BRAWH10000940//Rieske [2Fe-2S] domain//Phosphoglucose isomerase//FAD binding domain//Pyridine nucleotide-

disulphide oxidoreductase//Phytoene dehydrogenase related enzyme

BRAWH10001300//PH domain//RhoGAP domain//Tropomyosins

BRAWH10001620//alpha/beta hydrolase fold

BRAWH10001640//KRAB box//ENV polyprotein (coat polyprotein)

BRAWH10001680//Homeobox domain

35 BRAWH20000480//Transposase//Kinesin motor domain

BRAWH20001770//Serine hydroxymethyltransferase

BRAWH20003230//Wiskott Aldrich syndrome homology region 2

BRAWH20004430//Lectin (probable mannose binding)//Surfactant associated polypeptide

BRAWH20004760//Zinc finger, C2H2 type//Zinc finger, C2H2 type

40 BRAWH20006330//Zinc finger, C2H2 type//Zinc fing

BRAWH20006860//Eukaryotic protein kinase domain//Protein kinase C terminal domain

BRAWH20009840//Cytochrome P450

45 BRAWH20011660//Glycosyl hydrolases family 35

BRAWH20012030//Phorbol esters/diacylglycerol binding domain (C1 domain)//Zinc finger, C3HC4 type (RING finger) //PHD-finger

BRAWH20014180//Adenosine-deaminase (editase) domain

BRAWH20014610//TS-N domain//UBA domain

50 BRAWH20014840//Glycosyl transferases//Similarity to lectin domain of ricin beta-chain, 3 copies.

BRAWH20036890//Protein phosphatase 2C

BRAWH20059980//CUB domain//Low-density lipoprotein receptor domain class

A//CUB domain//Low-density lipoprotein receptor domain class A//Fz domain

BRAWH20060440//PPR repeat

BRAWH20064500//Nuclear transition protein 2//HMG (high mobility group) box

BRAWH20076050//Keratin, high sulfur B2 protein

BRAWH20089560//Poly-adenylate binding protein, unique domain.//Magnesium chelatase, subunit ChII//Uncharacterized protein family UPF0034//KE2 family protein//Formin Homology 2 Domain

BRAWH20093600//Family 4 glycosyl hydrolase

CD34C20000510//Glycosyl hydrolases family 18//Glycosyl hydrolases family 18//Chitin binding Peritrophin-A domain CTONG20005890//DNA gyrase/topoisomerase IV, subunit A//PDZ domain (Also known as DHR or GLGF).//PDZ domain (Also known as DHR or GLGF).

- 5 CTONG20011390//Prokaryotic dksA/traR C4-type zinc finger//Hepatitis C virus non-structural protein NS2 CTONG20013200//Uncharacterized protein family UPF0020
  - CTONG20018200//PHD-finger//PHD-finger//PWWP domain//SET domain
  - CTONG20019550//Spectrin repeat//Xylose isomerase//Spectrin repeat//Spectrin repeat//Spectrin repeat//Spectrin repeat//Protein of unknown function
- 10 DUF118//Spectrin repeat//Bacterial flagellin N-terminus//Spectrin repeat//Spectrin repeat//Spectrin repeat//Caulimovirus movement protein//Spectrin repeat
  - CTONG20025580//Zinc finger, C2H2 type//Zinc finger, C2
  - CTONG20028030//Domain of unknown function DUF19//Ribosomal protein S18
- 15 CTONG20028160//Cadherin domain//Cadherin domain//Cadherin domain//Cadherin domain//Cadherin cytoplasmic region
  - CTONG20028200//Papain family cysteine protease//E2 (early) protein, N terminal//T-box
  - CTONG20037820//Neurotransmitter-gated ion-channel//Neurotransmitter-gated ion-channel
  - CTONG20047160//PCI domain//Latrophilin/CL-1-like GPS domain
- 20 CTONG20055530//Ank repeat//Ank repea
  - CTONG20064490//PCI domain
  - D30ST20001840//RNA recognition motif, (a.k.a. RRM, RBD, or RNP domain)
- 25 DFNES20002120//Queuine tRNA-ribosyltransferase
  - DFNES20002680//Protozoan/cyanobacterial globin//KE2 family protein//Adhesin lipoprotein

FCBBF10005980//KRAB box//Zinc finger, C2H2 type//Zinc 
30 type//Zinc finger, C2H2 type

FCBBF10008870//Corticotropin-releasing factor family

FCBBF20000940//Homeobox domain

FCBBF20002320//T-box

FCBBF20002760//Kelch motif//Kelch motif//Kelch motif

- FCBBF20005910//Adenylate kinase//Viral (Superfamily 1) RNA helicase//TPR Domain//TPR Domain FCBBF20008150//LIM domain containing proteins//LIM domain containing proteins//LIM domain containing proteins//LIM domain containing proteins FCBBF20009510//KRAB box//Zinc finger, C2H2 type//Zinc finger
- 40 FCBBF20015380//GNS1/SUR4 family
  - FCBBF20016720//Domain of unknown function DUF94
  - FCBBF40002820//Electron transfer flavoprotein beta subunit
  - FCBBF50002610//Zinc finger, C2H2 type//Zinc finger, C2
- Zinc finger, C2H2 type//Zinc finger, C2H2 type
  - FEBRA20000530//BTB/POZ domain//Kelch motif//Kelch motif//
  - FEBRA20001050//TPR Domain//TPR Domain//TPR Domain//TPR Domain//PPR repeat//TPR Domain
  - FEBRA20003770//Ank repeat//Iron/manganese superoxide dismutases (SODM)//Ras association (RalGDS/AF-6) domain//FERM domain (Band 4.1 family)
    - FEBRA20003970//Zinc finger, C2H2 type//Zinc finger, C2
- FEBRA20003990//Zinc finger, C2H2 type//Zinc finger, C2
  - FEBRA20004540//Zinc finger, C2H2 type//Zinc finger, C2H2 type//BolA-like protein//Zinc finger, C2H2 type//Zinc finger, C2H2 ty

tion factor S-II (TFIIS)//Zinc finger, C2H2 type//Zinc 
FEBRA20005360//Cystatin domain

FEBRA20007330//EF hand//EF hand

5 FEBRA20007870//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

FEBRA20008560//Importin beta binding domain//Armadillo/beta-catenin-like repeats

FEBRA20008810//Actin

FEBRA20009720//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type FEBRA20011330//Trypsin and protease inhibitors//PCI domain

FEBRA20011460//SCAN domain

FEBRA20012450//Leucine rich repeat N-terminal domain//Leucine Rich Repeat//Leucine Rich Repea

FEBRA20014920//S-adenosylmethionine synthetase

FEBRA20015840//EGF-like domain//EGF-like 
20 FEBRA20017060//Immunoglobulin domain

FEBRA20017150//Zinc finger, C3HC4 type (RING finger)//Zinc finger, C3HC4 type (RING finger)//Insulin-like growth factor binding proteins//B-box zinc finger.//CONSTANS family zinc finger//B-box zinc finger.//Putative zinc finger in N-recognin//Fibronectin type III domain//SPRY domain

FEBRA20019890//PH domain//Putative GTP-ase activating protein for Arf//Ank repeat//Ank repeat

FEBRA20024290//RNA polymerase alpha subunit

FEBRA20024420//GMC oxidoreductases

FEBRA20025250//TBC domain

FEBRA20034290//CAP-Gly domain

FEBRA20043250//Ank repeat//Ank repeat//Ank repeat//Ank repeat//Ank repeat//Homeobox associated leucine zipper FEBRA20043290//Myosin tail//lactate/malate dehydrogenase//Troponin//Domain present in Hsp70 regulators//Interleukin-6/G-CSF/MGF family//Myosin tail

FEBRA20044900//Pou domain - N-terminal to homeobox domain//Spectrin repeat//Spectrin repeat

FEBRA20045920//Glycoprotease family

FEBRA20050140//Zinc finger, C2H2 type//Zinc finger, C2H2 type FEBRA20050790//Protein-tyrosine phosphatase//

FEBRA20057260//TBC domain

FEBRA20057880//PDZ domain (Also known as DHR or GLGF).

40 FEBRA20060920//DIX domain

FEBRA20062700//haloacid dehalogenase-like hydrolase

FEBRA20064760//Zinc finger, C2H2 type//Zinc finger, C2

45 finger, C2H2 type//PHD-finger//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Transcription factor S-II (TFIIS)//Zinc finger, C2H2 type//Zinc f

FEBRA20066670//Transthyretin precursor (formerly prealbumin)

FEBRA20067360//KRAB box//Zinc finger, C2H2 type//Zinc 
FEBRA20069420//KRAB box//Zinc finger, C2H2 type//Ribosomal protein L37e//Zinc finger, C2H2 type//Zinc 
FEBRA20070170//PX domain

FEBRA20072000//TPR Domain//TPR 
HCASM20002140//Cyclin

50

HCASM20003070//RNA recognition motif, (a.k.a. RRM, RBD, or RNP domain)

HEART20004110//POT family

HEART20005060//Occludin/ELL family//K-box region

HEART20005680//Nerve growth factor family

HHDPC20000550//Viral (Superfamily 1) RNA helicase//NB-ARC domain//Adenylate kinase//Adenylate kinase

HHDPC20000950//Extracellular link domain//Lectin C-type domain

HHDPC20001150//Collagen triple helix repeat (20 copies)//C1q domain

HHDPC20001490//UBA domain//Integrase Zinc binding domain//IBR domain//IBR domain

HHDPC20003150//Zn-finger in Ran binding protein and others.//Zinc knuckle

HHDPC20004550//FERM domain (Band 4.1 family)

HHDPC20004560//2S seed storage family

HHDPC20004620//FAD binding domain

HLUNG10000240//Transforming growth factor beta like domain

HLUNG10000370//TPR Domain//TPR Domain//TPR Domain//TPR Domain

HLUNG10000760//HMG (high mobility group) box

15 HLUNG10000990//Adenosylmethionine decarboxylase

HLUNG20000680//KRAB box//Zinc finger, C2H2 type//Zinc 
HLUNG20001420//REV protein (anti-repression trans-activator protein)//Bacteriorhodopsin//Photosystem II reaction centre T protein//Sugar (and other) transporter//FecCD transport family

HLUNG20001760//Transthyretin precursor (formerly prealbumin)

HLUNG20002550//Trypsin

HSYRA10001190//TBC domain

HSYRA10001370//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//PHD-finger//

Zinc finger, C2H2 type//Zinc finger, C2H2 type//BolA-like protein//Zinc finger, C2H2 type//Zinc finger

HSYRA10001780//Alpha-2-macroglobulin family N-terminal region

HSYRA20001350//F-box domain.//Kelch motif//Kelch motif//Kelch motif

30 HSYRA20005100//UvrD/REP helicase

HSYRA20013320//Insulin-like growth factor binding proteins//Thyroglobulin type-1 repeat

HSYRA20014760//von Willebrand factor type A domain

HSYRA20015740//Glucosamine-6-phosphate isomerase

HSYRA20016210//HesB-like domain

35 HSYRA20016310//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//PHD-finger//Zinc finger, C2H2 type//Phorbol esters/diacylglycerol binding domain (C1 domain)//Zinc finger, C2H2 type

IMR3210000440//ATP1G1/PLM/MAT8 family//Eukaryotic protein kinase domain

IMR3210001580//Extracellular link domain//Lectin C-type domain

IMR3210002420//KRAB box//Zinc finger, C2H2 type//Zinc 
type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

IMR3210002660//Cation efflux family

IMR3220002230//FHA domain//HIT family

IMR3220003020//Src homology domain 2

IMR3220007420//Zinc finger, C2H2 type

45 IMR3220007750//Nerve growth factor family//Kazal-type serine protease inhibitor domain//Thyroglobulin type-1 repeat//EF hand//Immunoglobulin domain//Immunoglobulin domain

IMR3220008380//Formyl transferase

IMR3220009190//Influenza Matrix protein (M1)//metallopeptidase family M24

IMR3220009730//Kinesin motor domain

50 IMR3220012180//tRNA pseudouridine synthase

IMR3220013170//Dual specificity phosphatase, catalytic domain

KIDNE10001040//Myb-like DNA-binding domain//Apolipoprotein A1/A4/E family//Thymidylate kinase//SNAP-25 family//Syntaxin

KIDNE20000410//Aminotransferases class-III pyridoxal-phosphate

KIDNE20000510//Zinc finger, C2H2 type//Zinc finger, C2H2 type//AN1-like Zinc finger//Zinc finger, C2H2 type//Zinc finger, C2H2 type//PHD-finger//Zinc finger, C2H2 type//Zinc IDNE20003150//Major intrinsic protein

KIDNE20003300//DnaJ domain

KIDNE20003490//Ubiquitin family//Viral matrix protein//Src homology domain 2//Acyltransferase

KIDNE20003750//G2 domain

5 KIDNE20004030//RNA helicase

KIDNE20004970//Kinesin motor domain//K-box region

KIDNE20005130//Aminotransferases class-III pyridoxal-phosphate//Aminotransferases class-III pyridoxal-phosphate

KIDNE20005170//Uncharacterized membrane protein family UPF0013

KIDNE20031850//Ras association (RaIGDS/AF-6) domain

KIDNE20033050//Amidase//Amidase

KIDNE20033730//SH3 domain//RhoGEF domain//PH domain

KIDNE20039940//DNA gyrase/topoisomerase IV, subunit A//SCAN domain//Zinc finger, C2H2 type//Zinc finger, C2H2 type

KIDNE20040840//Eukaryotic protein kinase domain//Phosphoribulokinase//Myosin head (motor domain)//Myosin head (motor domain)

KIDNE20043440//Ribosomal protein L36

KIDNE20044110//Viral methyltransferase//V-type ATPase 116kDa subunit family

KIDNE20046810//Dienelactone hydrolase family

KIDNE20048280//Amino acid permease//Sodium:neurotransmitter symporter family KIDNE20050420//Herpesvirus
UL25 family//Beige/BEACH domain/, WD domain, G-beta repeat//WD domain, G-beta re-

peat//WD domain, G-beta repeat//WD domain, G-beta repeat//AN1-like Zinc finger//FYVE zinc finger

KIDNE20052960//Actin

KIDNE20054770//Transmembrane amino acid transporter protein//lon transport protein//Amino acid permease KIDNE20056290//Acetyltransferase (GNAT) family

KIDNE20056760//Galponin homology (CH) domain

KIDNE20059080//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like repea

KIDNE20060140//WD domain, G-beta repeat//WD  KIDNE20060300//MutT-like domain

KIDNE20060530//Glycosyl transferase family 8

KIDNE20061490//SPRY domain

KIDNE20062480//Scorpion short toxins

KIDNE20062990//PH domain

35 KIDNE20066520//Bacterial extracellular solute-binding proteins, family 5

KIDNE20067600//Immunoglobulin domain//Immunoglobulin domain

KIDNE20073520//WW domain

KIDNE20075690//PMP-22/EMP/MP20/Claudin family

KIDNE20078100//Ribosomal protein L15//Integrase core domain//dUTPase

40 KIDNE20078110//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//PHD-finger//Zinc finger, C2H2 type LIVER10000670//Urocanase

LIVER10001040//AMP-binding enzyme

LIVER10002300//Respiratory-chain NADH dehydrogenase 51 Kd subunit

LIVER10004330//Cyclic nucleotide-binding domain//Glutathione S-transferases.//Uncharacterized protein family

45 UPF0028

LIVER10005420//Bowman-Birk serine protease inhibitor family

LIVER20000330//Peptidase family M1//K+ channel tetramerisation domain

LIVER20000370//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain

MAMGL10000560//K-box region

50 MAMGL10001780//Lumenal portion of Cytochrome b559, alpha (gene psbE) subunit.

MAMGL10001820//DIX domain

MESAN10000350//Neurohypophysial hormones, C-terminal Domain

MESAN10001800//Sterol O-acyltransferase

 $MESAN20000920//SAM\ domain\ (Sterile\ alpha\ motif)//PDZ\ domain\ (Also\ known\ as\ DHR\ or\ GLGF).//Phosphatidylinosing and the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of the standard of$ 

tol 3- and 4-kinases

MESAN20005010//PWWP domain

NB9N410000470//WD domain, G-beta repeat//WD 
NB9N410001350//lactate/malate dehydrogenase//Ras family

NB9N420001040//Na+/K+ ATPase C-terminus

NHNPC10000840//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)

5 NHNPG20002060//DnaJ domain

NHNPC20002120//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Putative zinc finger in N-recognin//Zinc finger, C2H2 type//Zinc NT2NE10000730//Leucine Rich Repeat//Leucine Rich Repeat//Leucine Rich Repeat

NT2NE10000830//7 transmembrane receptor (rhodopsin family)

NT2NE10001850//Divalent cation transporter//TPR Domain//TPR Domain

NT2NE20001740//RNA pseudouridylate synthase

15 NT2NE20002140//Rhodanese-like domain//Protein-tyrosine phosphatase//Dual specificity phosphatase, catalytic domain

NT2NE20002590//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//TRAF-type zinc finger//Zinc finger, C2H2 type

NT2NE20003690//Carbamoyl-phosphate synthase (CPSase)

NT2NE20003840//TPR Domain//TPR Domain//TPR Domain

NT2NE20005360//Ribosomal protein S2

NT2NE20005500//Retroviral aspartyl protease//Retroviral aspartyl protease

NT2NE20006580//Zinc finger, C3HC4 type (RING finger)//ICE-like protease (caspase) p10 domain//SPRY domain NT2NE20007630//Matrix protein (MA), p15

NT2NE20008090//KRAB box//Zinc finger, C2H2 type//Zinc T2NE20013720//Tryptophan synthase alpha chain//Ribulose-phosphate 3 epimerase family//Indole-3-glycerol phosphate synthases

NT2NE20016260//7 transmembrane receptor (rhodopsin family)

NT2NE20016660//DEAD/DEAH box helicase

NT2NE20034080//EGF-like domain//Laminin EGF-like (Domains III and V)

NT2NE20047160//Glycosyl transferase family 8

35 NT2NE20053710//Ank repeat

NT2NE20057200//Ubiquitin-conjugating enzyme//DNA mismatch repair proteins, mutS family

NT2RI10000270//Zinc finger C-x8-C-x5-C-x3-H type (and similar).

NT2RI10000480//Dual specificity phosphatase, catalytic domain

NT2RI20003410//Zinc finger, C2H2 type//Zinc finger, C2

NT2RI20004120//ENTH domain//DNA polymerase (viral) C-terminal domain

NT2RI20004210//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2

type//Zinc finger, C2H2 type

NT2RI20006690//Plant thionins

NT2RI20006850//Collagen triple helix repeat (20 copies)//Histone-like transcription factor (CBF/NF-Y) and archaeal histone

NT2RI20010100//Carboxylesterases//Carboxylesterases

NT2RI20010830//KRAB box//Zinc finger, C2H2 type//Zinc T2RI20014500//Xylose isomerase

NT2RI20015400//TPR Domain

NT2RI20015950//Keratin, high sulfur B2 protein

NT2RI20016210//Bacterial regulatory proteins, luxR family

NT2RI20016570//DnaJ central domain (4 repeats)

NT2RI20018460//Glutamine synthetase//Notch (DSL) domain//Notch (DSL) domain

NT2RI20018660//Immunoglobulin domain//SPRY domain

NT2RI20020220//Phosphatidylinositol-specific phospholipase C, X domain

NT2RI20025170//PDZ domain (Also known as DHR or GLGF).//PDZ domain (Also known as DHR or GLGF).

NT2RI20025300//Ubiquitin family

NT2RI20025410//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Putative zinc finger in N-recognin//Zinc finger, C2H2 type//Zinc NT2RI20025540//TPR Domain//TPR Domain//TPR Domain

NT2RI20025850//jmjN domain//jmjC domain

NT2RI20029580//C2 domain//C2 domain

NT2RI20029700//EF hand//EF hand

5 NT2RI20030110//Immunoglobulin domain

NT2RI20031540//Interleukin-6/G-CSF/MGF family

NT2RI20032050//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like repeats

NT2RI20033440//PDZ domain (Also known as DHR or GLGF).

NT2RI20036780//Subtilase family//Proprotein convertase P-domain

NT2RI20036950//Leucine Rich Repeat//Leucine Rich Repeat//Leucine Rich Repeat//Leucine Rich Repeat//Leucine Rich Repeat//Leucine Rich Repeat//Insulin/IGF/Relaxin family//Ribosomal RNA adenine dimethylases//SAM domain (Sterile alpha motif)//TFIIE alpha subunit//Zinc finger, C3HC4 type (RING finger)

NT2RI20037510//Formamidopyrimidine-DNA glycosylase

NT2RI20046060//K+ channel tetramerisation domain

25 NT2RI20049850//Domain of unknown function

NT2RI20050610//Peptidase family M1

NT2RI20050870//Voltage gated chloride channels//Xanthine/uracil permeases family//Sulfate transporter family//STAS domain

NT2RI20051500//Sialyltransferase family//Photosynthetic reaction center protein

30 NT2RI20053680//Zinc finger, C2H2 type

NT2RI20055640//Glutathione S-transferases.//Protein of unknown function DUF61//Glutathione S-transferases. NT2RI20056470//bZIP transcription factor//Transposase//bZIP transcription factor//Outer membrane efflux protein//Intermediate filament proteins

NT2RI20058110//Guanine nucleotide exchange factor for Ras-like GTPases; N-terminal motif//RasGEF domain

NT2RI20060710//Zinc finger, G2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//TRAF-type zinc finger//Zinc finger, C2H2 type//Zinc finger, C2H2 type

NT2RI20062100//Src homology domain 2

NT2RI20064120//Ras family//Cell division protein

NT2RI20066790//Immunoglobulin domain

40 NT2RI20067030//L1 (late) protein

NT2RI20067350//Zinc finger, G2H2 type//Zinc finger, C2H2 type

NT2RI20068250//Dolichyl-phosphate-mannose-protein mannosyltransferase//S-adenosylmethionine synthetase

NT2RI20068550//Helicases conserved C-terminal domain

NT2RI20070480//Atrial natriuretic peptide

NT2RI20070840//Immunoglobulin domain

NT2RI20070960//Hydroxymethylglutaryl-coenzyme A reductase//RhoGEF domain//Hpt domain//PH domain

NT2RI20071330//KRAB box//Zinc finger, C2H2 type//Zinc 
finger, C2H2 type
NT2RI20071480//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain,

G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat NT2RI20072540//Ribosomal RNA adenine dimethylases//SAM domain (Sterile alpha motif)//TFIIE alpha subunit//Zinc finger, C3HC4 type (RING finger)

NT2RI20073840//Eukaryotic protein kinase domain

NT2RI20074390//Zinc finger, C2H2 type//Zinc finger, C2

5 NT2RI20074980//Fz domain//Zinc carboxypeptidase//Zinc carboxypeptidase

NT2RI20078270//Acyl-CoA oxidase

NT2RI20078840//Homeobox domain//Bacterial regulatory proteins, crp family//Site-specific recombinases//Bacterial regulatory proteins, luxR family

NT2RI20078910//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain,

10 G-beta repeat//WD domain, G-beta repeat

NT2RI20080500//Immunoglobulin domain//Immunoglobulin domain//Immunog

NT2RI20083360//bZIP transcription factor

NT2RI20084810//Acyltransferase

NT2RI20085980//Bacterial regulatory proteins, crp family//CUB domain//F5/8 type C domain

NT2RI20087140//SET domain

NT2RI20088120//Bindin//HupF/HypC family

NT2RI20089420//Immunoglobulin domain//PKD domain

NT2RI20090650//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C3HC4 type (RING finger)//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C3HC4 type (RING finger)//Zinc finger, C2H2 type//Putative zinc finger in N-recognin//Zinc finger, C2H2 type//Zinc finger, C2H2 typ

NT2RI20091440//SPRY domain

NT2RI20092150//SCAN domain//Integrase core domain

NT2RI20092890//Leucine rich repeat N-terminal domain//Leucine Rich Repeat//Leucine Rich Re

NT2RI20094060//DHHC zinc finger domain

30 NT2RP60000320//Cytochrome c oxidase subunit III//7 transmembrane receptor (Secretin family)//Domain found in Dishevelled, Egl-10, and Pleckstrin

NT2RP60000720//Molluscan rhodopsin C-terminal tail

NT2RP60000860//Ubiquitin-conjugating enzyme

NT2RP60001000//KRAB box//Zinc finger, C2H2 type//Zinc 
NT2RP60001090//BTB/POZ domain//HMG (high mobility group) box//Kelch motif//Kelch mo

NT2RP60001230//TPR Domain//TPR Domain//TPR Domain//TPR Domain//PPR repeat//TPR Domain

40 NT2RP60001270//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//TRAF-type zinc finger//Zinc finger, C2H2 type//Zinc finger, C2H2 type

NT2RP70000690//Methyl-CpG binding domain

NT2RP70002380//Bacterial export proteins, family 3

NT2RP70002710//Zinc finger, C2H2 type//Zinc finger, C2H2 type

NT2RP70004770//TPR Domain//TPR 2RP70011660//Iron/manganese superoxide dismutases (SODM)//E1-E2 ATPase//Domain of unknown function DUF19//Photosystem II reaction centre T protein

NT2RP70012310//Alphavirus E3 glycoprotein//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain) NT2RP70015910//Kringle domain//WSC domain//CUB domain

NT2RP70018560//SAM domain (Sterile alpha motif)//Sterile alpha motif (SAM)/Pointed domain

NT2RP70023760//WD domain, G-beta repeat//WD 
G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//TBC domain

NT2RP70024500//Picornavirus coat protein (VP4)//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 ty

NT2RP70029060//Oxysterol-binding protein//Hsp90 protein

NT2RP70030550//PHD-finger

NT2RP70032030//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//GATA zinc finger//

Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

NT2RP70033040//Rhodanese-like domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding domain//Integrase Zinc binding d

NT2RP70036290//Glypican//Leucine Rich Repeat//Leucine Rich Repeat

NT2RP70036470//Porphobilinogen deaminase//GHMP kinases putative ATP-binding proteins

10 NT2RP70036800//Methanol dehydrogenase beta subunit//BTB/POZ domain//Kelch motif//Kelch mot

NT2RP70039600//Calpain inhibitor repeat

NT2RP70042040//PHD-finger//FYVE zinc finger//Zinc finger, C2H2 type//Zinc fing

NT2RP70042330//TPR Domain//TPR 2RP70045410//Helix-loop-helix DNA-binding domain

NT2RP70046560//PHD-finger//PHD-finger

NT2RP70046870//Macrophage migration inhibitory factor (MIF)//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat//Arenavirus glycoprotein// WD domain, G-beta repeat

NT2RP70049150//PWWP domain

NT2RP70049250//WH1 domain

NT2RP70055020//Sigma-54 interaction domain//ATPases associated with various cellular activities (AAA)

NT2RP70055130//KRAB box//Zinc finger, C2H2 type//Zinc 0 NT2RP70061880//GTPase-activator protein for Ras-like GTPase

NT2RP70062960//SNF2 and others N-terminal domain//SNF2 and others N-terminal domain//Leishmanolysin//Helicases conserved C-terminal domain

NT2RP70063040//Plant PEC family metallothionein//Cell division protein

NT2RP70064900//KRAB box//Zinc finger, C2H2 type//Zinc 
NT2RP70065270//LIM domain containing proteins//LIM domain containing proteins//LIM domain containing proteins//

NT2RP70069860//KRAB box//Zinc finger, C2H2 type//Zinc 
45 NT2RP70071770//STAT protein//Zinc finger, C3HC4 type (RING finger)

NT2RP70072210//Viral (Superfamily 1) RNA helicase

NT2RP70072520//PAS domain//PAS domain//PAS domain//Eukaryotic protein kinase domain

NT2RP70074060//Glutamine synthetase

NT2RP70075370//Zinc finger, C3HC4 type (RING finger)//B-box zinc finger.//CONSTANS family zinc finger//Putative zinc finger in N-recognin//SPRY domain

NT2RP70076100//SAM domain (Sterile alpha motif)

NT2RP70076430//Apolipoprotein A1/A4/E family

NT2RP70079250//F5/8 type C domain//Laminin G domain//Laminin G domain//EGF-like domain//Thrombospondin N-terminal -like domains//Laminin G domain

55 NT2RP70079750//Laminin G domain

NT2RP70081370//Herpesvirus glycoprotein M//ABC transporter//Ribosomal S17

NT2RP70081440//Eukaryotic protein kinase domain

NT2RP70081670//Helix-hairpin-helix motif.//S1 RNA binding domain

NT2RP70084060//Glycosyl transferases group 1

NT2RP70084410//Bromodomain//Bromodomain//Bromodomain//Bromodomain//Bromodomain//BAH domain

NT2RP70084870//Sulfotransferase proteins

NT2RP70085500//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III domain//Fibronectin type III doma

NT2RP70087200//KRAB box//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 t

finger, C2H2 type//DM DNA binding domain//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

NT2RP70088550//PH domain

NT2RP70090120//Cytochrome oxidase subunit II//Voltage gated chloride channels//CBS domain//CBS domain

NT2RP70090190//Zinc finger, C2H2 type//Zinc finger, G2H2 type//Zinc finger, C2H2 T2RP70091490//Sugar (and other) transporter

NT2RP70092360//Immunoglobulin domain//Immunoglobulin domain//Immunog

NT2RP70093220//CbiM//Voltage gated chloride channels//CBS domain//CBS domain NT2RP70093700//WD domain, G-beta repeat//Virion host shutoff protein//WD domain, G-beta repeat//WD beta repeat//WD domain, G-beta repeat//WD domain, G-beta repeat

NT2RP70093940//IPT/TIG domain

NT2RP70094810//Myelin proteolipid protein (PLP or lipophilin)//Influenza non-structural protein (NS1)//Protein of unknown function DUF67//Patched family//7 transmembrane receptor (metabotropic glutamate family)

NT2RP70094980//EGF-like domain//EGF-like domain//Trypsin Inhibitor like cysteine rich domain//EGF-like domain// EGF-like domain//Trypsin Inhibitor like cysteine rich domain//EGF-like domain//von Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//von Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won Willebrand factor type C domain//won W

NTONG10000520//BTB/POZ domain//Kelch motif//Kelch motif

NTONG10001300//HIyD family secretion protein//Biopterin-dependent aromatic amino acid hydroxylase//Caspase recruitment domain

NTONG10002570//Rhabdovirus spike glycoprotein

NTONG10002640//Phosphoglucomutase/phosphomannomutase

NTONG20003340//Zinc finger, C2H2 type//Zinc finger, C2H2 type

40 NTONG20008780//Bacterial regulatory proteins, lacl family//Site-specific recombinases

NTONG20009660//Nebulin repeat//Nebulin repeat/

NTONG20015500//Zinc finger, C2H2 type//Zinc finger, C2

NTONG20016120//PH domain//Phosphoglycerate mutase family//Oxysterol-binding protein OCBBF10000910//Sorbin homologous domain//Peptidase family M1//SH3 domain//SH3 domain//SH3 domain OCBBF10001180//K+ channel tetramerisation domain

50 OCBBF10001190//DNA topoisomerase II (N-terminal region)

OCBBF10001220//BTB/POZ domain//Kelch motif//Kelch motif//Kelch motif//Kelch motif//Kelch motif//Celch motif//Kelch motif//Kelch motif//Kelch motif//Kelch motif//Celch motif//Kelch motif//Celch motif//Kelch motif//Celch motif//

OCBBF20007190//Metallo-beta-lactamase superfamily

OCBBF20008240//bZIP transcription factor//tRNA synthetase class II (G, H, P, S and T)

OCBBF20010750//Spectrin repeat

45

OCBBF20011010//Zinc finger, C2H2 type//Zinc finger, C2H2 type//PHD-finger//Zinc finger, C2H2 type//Zinc finger,

C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 t

OCBBF20011240//Glutathione S-transferases.

OCBBF20011400//WD domain, G-beta repeat//K+ channel tetramerisation domain//7-fold repeat in Clathrin and VPS OCBBF20011760//BTB/POZ domain//Kelch motif//Kelch motif//Kelch motif//Kelch motif//Kelch motif//Celch motif//Kelch OCBBF20013070//Zinc finger, C2H2 type//Zinc finger, C2H2 type

OCBBF20014940//UBA domain

OCBBF20015270//Zinc finger, C2H2 type//Bacterial type II secretion system protein

OCBBF20015280//lactate/malate dehydrogenase

OCBBF20015860//ATP synthase Alpha chain, C terminal

PEBLM10000340//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)//Zn-finger in Ran binding protein and others.

15 PEBLM10000680//Actin

PEBLM20001120//Thymidylate kinase//Leucine Rich Repeat//Leucine Rich Rep

PEBLM20002480//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//TRAF-type zinc finger//Zinc finger, C2H2 type//Transcription factor S-II (TFIIS)//Zinc finger, C2H2 type//Zinc finger, G2H2 type//Zinc finger, C2H2 type

PEBLM20002700//KRAB box//Zinc finger, C2H2 type//Zinc 
PEBLM20003080//Zinc finger, C2H2 type//Zinc finger, C2

finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

PEBLM20003950//SCAN domain

PEBLM20004790//Src homology domain 2//Eukaryotic protein kinase domain

PLACE50000370//7-fold repeat in Clathrin and VPS

PLACE50000580//Apolipoprotein A1/A4/E family

PLACE50000680//Sushi domain (SCR repeat)//Sushi domain (SCR repeat)

PLACE60002050//Zinc finger, C2H2 type//Zinc finger, C2

35 PLACE60012810//AMP-binding enzyme

PLACE60014430//moaA / nifB / pqqE family//MoaC family

PLA0E60018860//Adenylate and Guanylate cyclase catalytic domain

PLACE60021020//Integrase Zinc binding domain//Integrase Zinc binding domain//DnaJ central domain (4 repeats)

PLACE60021510//KRAB box//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Putative zinc finger in N-recognin//Zinc finger, C2H2 type//Zinc finger, C2H2

finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc fin

PLACE60030380//Zinc finger, C2H2 type//Zinc finger, C2

45 PLACE60032040//Hirudin

PLACE60037050//ENV polyprotein (coat polyprotein)

PLACE60038500//Mitochondrial carrier proteins//Mitochondrial carrier proteins PLACE60044640//Small cytokines (interine/chemokine), interleukin-8 like

PLACE60046630//Phorbol esters/diacylglycerol binding domain (C1 domain)//PHD-finger

50 PROST10003430//PHD-finger//Zinc finger, C3HC4 type (RING finger)//TRAF-type zinc finger//PDZ domain (Also known as DHR or GLGF).//PDZ domain (Also known as DHR or GLGF).//PDZ domain (Also known as DHR or GLGF).//WHEP-TRS domain containing proteins//PDZ domain (Also known as DHR or GLGF).

PROST10005360//F5/8 type C domain//Laminin G domain//Laminin G domain//EGF-like domain//Fibrinogen beta and gamma chains, C-terminal globular domain

PROST20003250//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)

PROST20018230//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

PROST20018990//ADP-ribosylation factor family//Ras family

PROST20023380//K+ channel tetramerisation domain//BTB/POZ domain

PROST20029600//Small cytokines (intecrine/chemokine), interleukin-8 like//Immunoglobulin domain

PROST20031170//Heavy-metal-associated domain//HECT-domain (ubiquitin-transferase).

PROST20033380//TPR Domain//TPR Domain//TPR Domain

PROST20033400//Eukaryotic protein kinase domain

5 PROST20043320//Paramyxovirus nucleocapsid protein//SH3 domain

PROST20044160//Tropomyosins

PROST20051210//Protein phosphatase 2C//Protein phosphatase 2C

PROST20064500//Sulfotransferase proteins

PROST20067370//TRAF-type zinc finger//DnaJ central domain (4 repeats)

PROST20069880//Atrial natriuretic peptide

PROST20072890//K+ channel tetramerisation domain//BTB/POZ domain

PROST20073170//K+ channel tetramerisation domain//BTB/POZ domain//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger present in dystrophin, CBP/p300

PROST20073890//Platelet-derived growth factor (PDGF)

5 PROST20085160//Tropomyosins//Tropomyosins

PROST20094830//PH domain

PUAEN10003220//Photosystem I reaction centre subunit VIII

SALGL10000050//Permeases for cytosine/purines, uracil, thiamine, allantoin

SALGL10000650//SAM domain (Sterile alpha motif)//Sterile alpha motif (SAM)/Pointed domain

SALGL10001570//Colicin pore forming domain//MotA/ToIQ/ExbB proton channel family

SKMUS10000140//Ubiquitin family//Ubiquitin famil

SKMUS10000640//Zinc finger, C3HC4 type (RING finger)//Zinc finger, C3HC4 type (RING finger)//PHD-finger//B-box

25 zinc finger.//3'5'-cyclic nucleotide phosphodiesterase

SKMUS10001040//bZIP transcription factor

SKMUS10001180//Coronavirus S2 glycoprotein

SKMUS10001290//MutT-like domain

SKMUS10001770//Protein-L-isoaspartate(D-aspartate) 0-methyltransferase (PCMT) SKMUS20000740//ubiE/COQ5

30 methyltransferase family//Cyclopropane-fatty-acyl-phospholipid synthase

SKMUS20001170//ATP synthase Alpha chain, C terminal//MAGE family

SKMUS20002710//Hepatitis C virus capsid protein

SKMUS20003900//Mov34/MPN/PAD-1 family

SKMUS20004580//LIM domain containing proteins//Nebulin repeat//Nebulin repeat//Nebulin repeat//Nebulin repeat//

Nebulin repeat//Nebulin repeat//Nebulin repeat//Nebulin repeat

SKMUS20007240//Thiamine pyrophosphate enzymes//Thiamine pyrophosphate enzymes enzymes

SKMUS20008630//OB-fold nucleic acid binding domain//tRNA synthetases class II (F)//tRNA synthetases class II (D, K and N)

40 SKMUS20009540//F-box domain.

SKMUS20011290//Iron-containing alcohol dehydrogenases//Iron-containing alcohol dehydrogenases

SKMUS20013640//Laminin EGF-like (Domains III and V)

SKMUS20016340//HMG (high mobility group) box

SKMUS20016620//Ank repeat//Ank repeat//Glutamine amidotransferases class-II//Ank repeat

45 SKMUS20016680//Phorbol esters/diacylglycerol binding domain (C1 domain)//CONSTANS family zinc finger//SH3 domain

SKNMC10000290//Zinc finger C-x8-C-x5-C-x3-H type (and similar).

SKNMC10002510//ABC transporter transmembrane region.//Phosphoribulokinase//ATPases associated with various cellular activities (AAA)//ABC transporter

SKNMC20000650//Zinc finger, C2H2 type//Protein phosphatase 2C//Zinc finger, C2H2 type//Zinc finger, C2

SKNMC20000970//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)//Elongation factor TS//Protein-L-iso-aspartate(D-aspartate) 0-methyltransferase (PCMT)//Met-10+ like-proteins

SKNMC20002240//KRAB box//Zinc finger, C2H2 type//LIM domain containing proteins//Zinc finger, C2H2 type//TRAF-

type zinc finger//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//LIM domain containing proteins//PHD-finger//Zinc finger, C2H2 type

SKNMC20003560//Helix-loop-helix DNA-binding domain

SKNMC20010570//F-box domain.

SKNMC20015030//Keratin, high sulfur B2 protein

SKNMC20015960//Ank repeat//Ank 
5 raxin and MAP1B proteins//FYVE zinc finger

SKNSH10001740//Pyridoxal-dependent decarboxylase

SKNSH10003010//SH3 domain

SKNSH20003470//Heme-binding domain in cytochrome b5 and oxidoreductases

SMINT10000160//UDP-glucoronosyl and UDP-glucosyl transferases

5MINT10000420//Cytochrome oxidase subunit II//ABC transporter//Biopterin-dependent aromatic amino acid hydroxylase

SMINT10000570//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain

SMINT10000710//Immunoglobulin domain

SMINT10001030//Ank repeat//Ank 
15 Ank repeat//Ank repeat

SMINT20002270//Disintegrin//Trans-activation protein X

SMINT20002770//Transcriptional regulatory protein, C terminal//Immunoglobulin domain

SPLEN10001430//HMG (high mobility group) box

SPLEN20000720//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//TRAF-type zinc finger//Zinc

finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

SPLEN20001340//Peptidase family M20/M25/M40

SPLEN20001970//Transcription factor TFIIB repeat

SPLEN20002670//WD domain, G-beta repeat

SPLEN20003570//RasGEF domain//Ras association (RaIGDS/AF-6) domain

25 STOMA10001860//Cytosolic long-chain acyl-CoA thioester hydrolase//OB-fold nucleic acid binding domain//Cytosolic long-chain acyl-CoA thioester hydrolase

STOMA20000880//Immunoglobulin domain

STOMA20001210//Cys/Met metabolism PLP-dependent enzyme//Aminotransferases class-I

STOMA20002570//MgtC family

30 STOMA20002890//Adaptin N terminal region

STOMA20003960//LIM domain containing proteins//LIM domain containing proteins STOMA20004820//PH domain// EF hand//Phosphatidylinositol-specific phospholipase C. X domain

SYNOV10001280//Lipoate-protein ligase B

SYNOV20013740//KRAB box//Bacterial type II secretion system protein I/J//Zinc finger, C2H2 type//Zinc finger, C2H2

type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 typ

SYNOV20014510//SRF-type transcription factor (DNA-binding and dimerisation domain)

SYNOV20016480//glycosyl transferase family

TESTI10000420//K-box region//Penicillin amidase

40 TESTI10000510//Transient receptor

TESTI10000550//Homeobox domain

TESTI10000640//K+ channel tetramerisation domain//BTB/POZ domain//Kelch motif//Kelch TESTI10000700//Ubiquitin carboxyl-terminal hydrolases family 2//Ubiquitin carboxyl-terminal hydrolase family 2

TESTI10001270//PLAT/LH2 domain//PLAT/LH2 domain//PLAT/LH2 domain

TESTI10001380//Subtilase family//Proprotein convertase P-domain

TESTI10001680//Leucine Rich Repeat//Leucine Rich Re

TESTI20001200//KRAB box

50 TESTI20001540//Eukaryotic protein kinase domain

TESTI20001770//von Willebrand factor type A domain//Proprotein convertase P-domain

TESTI20002070//NifU-like N terminal domain

TESTI20002380//Exonuclease//3'-5' exonuclease

TESTI20002530//Ubiquitin family

TESTI20003560//Tubulin/FtsZ family

TESTI20005910//Adenylate kinase//Elongation factor Tu family//Adenylate kinase//6-phosphofructo-2-kinase//Shikimate kinase//pKID domain//Adenylate kinase//Thymidylate kinase//ATPases associated with various cellular activities (AAA)

TESTI20006000//Ank repeat//CAP-Gly domain

TESTI20006270//TPR Domain//TPR Domain//TPR Domain//4-hydroxyphenylpyruvate dioxygenase C terminal domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Domain//TPR Doma

TESTI20006950//Tudor domain//Stathmin family

TESTI20006990//KOW motif//Kinesin motor domain

TESTI20007070//DM DNA binding domain

TESTI20007840//Apolipoprotein A1/A4/E family

TESTI20008490//Apolipoprotein A1/A4/E family

TESTI20008830//Immunoglobulin domain

TESTI20010490//KRAB box//Zinc finger, C2H2 type//Zinc 
TESTI20011410//RhoGEF domain//PH domain//Phorbol esters/diacylglycerol binding domain (C1 domain)//CXXC zinc finger//FYVE zinc finger//PH domain

15 TESTI20012370//K+ channel tetramerisation domain//BTB/POZ domain//Ornithine decarboxylase antizyme//Kelch motif//Kelch motif//Kelch motif//Kelch motif//Kelch motif/

TESTI20012690//Biotin-requiring enzymes//Biotin-requiring enzymes//2-oxo acid dehydrogenases acyltransferase (catalytic domain)

TESTI20013300//EF hand//EF hand//Ubiquitin carboxyl-terminal hydrolases family 2

20 TESTI20013450//Double-stranded RNA binding motif//Aldehyde oxidase and xanthine dehydrogenase, C terminus// Adenosine-deaminase (editase) domain

TESTI20014200//ABC 3 transport family//Sugar (and other) transporter

TESTI20015110//bZIP transcription factor//Troponin//Domain of unknown function DUF87

TESTI20015560//K+ channel tetramerisation domain//BTB/POZ domain

25 TESTI20016610//Leptin

TESTI20018150//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

TESTI20018270//Transketolase//Dehydrogenase E1 component//Transketolase

TESTI20018520//F5/8 type C domain//Laminin G domain//Ribosomal protein L11//Thrombospondin N-terminal -like

domains//Laminin G domain//EGF-like domain//Fibrinogen beta and gamma chains, C-terminal globular domain TESTI20018690//SAM domain (Sterile alpha motif)

TESTI20018790//KRAB box//Zinc finger, C2H2 type//Zinc 
35 TESTI20020570//E1 Protein, N terminal domain//Actin

TESTI20020810//7 transmembrane receptor (metabotropic glutamate family)//Transmembrane amino acid transporter protein

TESTI20021050//TPR Domain//TPR 
type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

TESTI20022230//Nucleosome assembly protein (NAP)

TESTI20022510//Calreticulin family//PHD-finger

TESTI20022560//Leucine Rich Repeat//Leucine Rich Re

TESTI20024980//PDZ domain (Also known as DHR or GLGF).//SH3 domain//Guanylate kinase

TESTI20025160//MAGE family

45

TESTI20025800//lactate/malate dehydrogenase//Pyridine nucleotide-disulphide oxidoreductase

TESTI20026760//SPRY domain

TESTI20027070//Type I phosphodiesterase / nucleotide pyrophosphatase

TESTI20027290//RhoGAP domain

TESTI20027890//KRAB box//Dictyostelium (slime mold) repeats//Dictyostelium (slime mold) repeats//Zinc finger, C2H2 type//Dictyostelium (slime mold) repeats//Zinc finger, C2H2 type//Dictyostelium (slime mold) repeats TESTI20029120//Eukaryotic protein kinase domain

TESTI20030050//Histone-like transcription factor (CBF/NF-Y) and archaeal histone

TESTI20030370//MYND finger//TPR Domain//TPR Domain//TPR Domain//Adaptin N terminal region

TESTI20030710//Herpesvirus UL25 family

TESTI20031090//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like

repeats//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like repeats//Armadillo/beta-catenin-like repeats/

TESTI20031300//TPR Domain

TESTI20031520//mRNA capping enzyme

TESTI20031960//WD domain, G-beta repeat

TESTI20032280//Myb-like DNA-binding domain

TESTI20033250//UBX domain//Orotidine 5'-phosphate decarboxylases

TESTI20033270//DM DNA binding domain

TESTI20033540//Zinc finger, C2H2 type

10 TESTI20033560//F-box domain.

TESTI20034190//ATP synthase Alpha chain, C terminal//AMP-binding enzyme

TESTI20034980//RhoGEF domain

TESTI20035120//C2 domain//Kinesin motor domain

TESTI20035510//NOL1/NOP2/sun family

TESTI20035890//UBA domain//Zinc finger C-x8-C-x5-C-x3-H type (and similar).

TESTI20036250//TSC-22/dip/bun family//NAD dependent epimerase/dehydratase family//Adenylate kinase//ATPases associated with various cellular activities (AAA)

TESTI20037810//Eukaryotic protein kinase domain

TESTI20038940//IQ calmodulin-binding motif//IQ calmodulin-binding motif//IO calmodulin-binding motif

TESTI20040000//short chain dehydrogenase//3-beta hydroxysteroid dehydrogenase/isomerase family

TESTI20040310//Protein of unknown function DUF84

TESTI20041220//VPR/VPX protein

TESTI20042870//ET module

TESTI20042950//3'5'-cyclic nucleotide phosphodiesterase//Peptidase family M1

25 TESTI20049820//Cyclic nucleotide-binding domain

TESTI20053960//KRAB box//Zinc finger, C2H2 type//Zinc 
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type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

TESTI20055840//PH domain//PH domain

TESTI20056900//Urease, gamma subunit//IQ calmodulin-binding motif//IQ calmodulin-binding motif

TESTI20057310//Tropomyosins

TESTI20057420//Acyl CoA binding protein//Ribosomal Proteins L2

35 TESTI20064830//Tetrahydrofolate dehydrogenase/cyclohydrolase

TESTI20068660//Domain of unknown function DUF19//TPR Domain//TPR Domain//TPR Domain

TESTI20068720//Zinc finger, C2H2 type//Zinc finger, C2H2 type

TESTI20074640//KRAB box//Zinc finger, C2H2 type//MYND finger//Zinc finger, C2H2 type//Zinc finger, C2H

finger, C2H2 type//MYND finger//Zinc finger, C2H2 type

TESTI20074800//Glypican

45 TESTI20077490//Signal peptidase (SPase) II

TESTI20078640//SCAN domain

TESTI20078720//ATP synthase B/B' CF(0)//Ribosomal L29 protein TESTI20079510//Immunoglobulin domain//Immunoglobulin domain//Adenovirus E3 region protein CR1//Immunoglobulin domain//Immunoglobulin domain//Fibronectin type III domain//Fibronectin type III domain

50 TESTI20080200//MttB family UPF0032

TESTI20080330//Ribosomal protein L14p/L23e

TESTI20083430//TPR Domain

TESTI20083870//EF hand//EF hand//EF hand//Phosphatidylinositol 3- and 4-kinases//EF hand

TESTI20086570//MAGE family

TESTI20087740//TPR Domain//TPR Domain//Outer membrane efflux protein//TPR Domain//TPR Domain

TESTI20138320//Transketolase

TESTI20140360//metallopeptidase family M24

TEST120177400//WD domain, G-beta repeat//WD domain, G-beta repeat/

THYMU10000830//FAD binding domain

THYMU10001760//Immunoglobulin domain

THYMU10002910//Adaptin N terminal region

THYMU10003590//PH domain//RhoGAP domain

5 THYMU10004590//HMG (high mobility group) box

THYMU10005580//Synaptobrevin

THYMU20002360//Pumilio-family RNA binding domains (aka PUM-HD, Pumilio homology domain)

THYMU20003690//Prokaryotic DNA topoisomerase//Protein of unknown function DUF122//Eukaryotic protein kinase domain

10 TRACH10000740//Immunoglobulin domain//Immunoglobulin in domain//Immunoglobulin domain//Immunoglobulin domain

TRACH10001250//Immunoglobulin domain//Immunoglobulin in domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immunoglobulin domain//Immu

TRACH20000150//Fatty acid desaturase//Protein phosphatase 2C

TRACH20001850//Molluscan rhodopsin C-terminal tail

TRACH20002370//KRAB box//Zinc finger, C2H2 type//FYVE zinc finger/, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type/

TRACH20002500//WD domain, G-beta repeat//WD ACH20002890//PH domain//Src homology domain 2

TRACH20003930//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)

TRACH20004110//Zinc finger, C2H2 type

TRACH20004200//Neurohypophysial hormones, C-terminal Domain//Keratin, high sulfur B2 protein

25 TRACH20004720//Aminotransferases class-II//Aminotransferases class-I

TRACH20004960//AMP-binding enzyme

TRACH20006650//LacY proton/sugar symporter//Sugar (and other) transporter

TRACH20006750//E1 Protein, N terminal domain//ATP synthase (E/31 kDa) subunit TRACH20009260//short chain dehydrogenase

70 TRACH20012890//RNA recognition motif. (a.k.a. RRM, RBD, or RNP domain)

TRACH20016070//Adenylate cyclase

UMVEN10001220//Corticotropin-releasing factor family

UMVEN20001330//C2 domain//C2 domain//C2 domain

UTERU10001600//SCAN domain//Zinc finger, C2H2 type//Zinc 5 C2H2 type//Zinc finger, C2H2 type//Zinc finger, C2H2 type

UTERU10001920//Integrase core domain

# **EXAMPLE 6**

# Functional categorization based on the full-length nucleotide sequences

**[0209]** The functional prediction and categorization of the proteins encoded by the clones were carried out based on the result of homology search of the databases of GenBank, Swiss-Prot, UniGene and nr (see the Homology Search Result Data) for the full-length nucleotide sequences and the result of domain search of the amino acid sequences deduced from the full-length nucleotide sequences (see Example 5).

[0210] The clone predicted to belong to the category of secretory protein/membrane protein means a clone having hit data with some annotation, such as growth factor, cytokine, hormone, signal, transmembrane, membrane, extracellular matrix, receptor, G-protein coupled receptor, ionic channel, voltage-gated channel, calcium channel, cell adhesion, collagen, connective tissue, etc., suggesting that it is a secretory or membrane protein, or means a clone in which the presence of nucleotide sequence encoding a signal sequence or transmembrane domain was suggested by the results of PSORT and SOSUI analyses for deduced ORF.

[0211] The clone predicted to belong to the category of glycoprotein-related protein means a clone having hit data with some annotation, such as glycoprotein, suggesting that the clone encodes a glycoprotein-related protein.

[0212] The clone predicted to belong to the category of signal transduction-related protein means a clone having hit data with some annotation, such as serine/threonine-protein kinase, tyrosine-protein kinase, SH3 domain, SH2 domain, etc., suggesting that the clone encodes a signal transduction-related protein.

[0213] The clone predicted to belong to the category of transcription-related protein means a clone having hit data with some annotation, such as transcription regulation, zinc finger, homeobox, etc., suggesting that the clone encodes

a transcription-related protein.

- [0214] The clone predicted to belong to the category of disease-related protein means a clone having hit data with some annotation, such as disease mutation, syndrome, etc., suggesting that the clone encodes a disease-related protein, or means a clone whose full-length nucleotide sequence has hit data for Swiss-Prot, GenBank, or UniGene, where the hit data corresponds to genes or proteins which have been deposited in the Online Mendelian Inheritance in Man (OMIM) (http://www.ncbi.nlm.nih.gov/Omim/), which is the human gene and disease database.
- [0215] The clone predicted to belong to the category of enzyme and/or metabolism-related protein means a clone having hit data with some annotation, such as metabolism, oxidoreductase, E. C. No. (Enzyme commission number), etc., suggesting that the clone encodes an enzyme and/or metabolism-related protein.
- [0216] The clone predicted to belong to the category of cell division and/or cell proliferation-related protein means a clone having hit data with some annotation, such as cell division, cell cycle, mitosis, chromosomal protein, cell growth, apoptosis, etc., suggesting that the clone encodes a cell division and/or cell proliferation-related protein.
- [0217] The clone predicted to belong to the category of cytoskeleton-related protein means a clone having hit data with some annotation, such as structural protein, cytoskeleton, actin-binding, microtubles, etc., suggesting that the clone encodes a cytoskeleton-related protein.
- [0218] The clone which is predicted to belong to the category of nuclear protein and/or RNA synthesis-related protein means a clone having hit data with some annotation, such as nuclear protein, RNA splicing, RNA processing, RNA helicase, polyadenylation, etc., suggesting that the clone encodes a nuclear protein and/or RNA synthesis-related protein.
- [0219] The clone predicted to belong to the category of protein synthesis and/or transport-related protein means a clone having hit data with some annotation, such as translation regulation, protein biosynthesis, amino-acid biosynthesis, ribosomal protein, protein transport, signal recognition particle, etc., suggesting that the clone encodes a protein synthesis and/or transport-related protein.
  - [0220] The clone predicted to belong to the category of cellular defense-related protein means a clone having hit data with some annotation, such as heat shock, DNA repair, DNA damage, etc., suggesting that the clone encodes a cellular defense-related protein.
  - [0221] The clone predicted to belong to the category of development and/or differentiation-related proteins means a clone having hit data with some annotation, such as developmental protein, etc., suggesting that the clone encodes a development and/or differentiation-related protein.
- 30 [0222] The clone predicted to belong to the category of DNA-binding and/or RNA-binding protein means a clone having hit data with some annotation, such as DNA-binding, RNA-binding, etc.
  - [0223] The clone predicted to belong to the category of ATP-binding and/or GTP-binding protein means a clone having hit data with some annotation, such as ATP-binding, GTP-binding, etc.
  - [0224] In this functional categorization, when a single clone corresponded to multiple categories of those shown above, the clone was assigned to the multiple categories. However, the function of a protein is not restricted to the functional category in this classification, and there is the possibility that other functions are newly assigned to the protein.

    [0225] The clones predicted to belong to the category of secretory protein and/or membrane protein are the following 439 clones.
- 3NB6910000180, 3NB6910000850, 3NB6920000290, 3NB6920003300, 3NB6920005450, 3NB6920010020, ADRGL10000180, ADRGL10001600, ADRGL20003230, BGGI120010970, BNGH410000340, BNGH410001040, BNGH410001180, BNGH410001370, BNGH410001980, BRACE10000730, BRACE10001690, BRACE20002800, BRACE20007180, BRACE20010650, BRACE20011170, BRACE20011430, BRACE20013400, BRACE20013520, BRACE20014230, BRACE20014530, BRACE20014920, BRACE20015080, BRACE20018590, BRACE20022270,
- BRACE20024680, BRACE20026350, BRACE20026850, BRACE20030780, BRACE20031100, BRACE20034490, BRACE20071380, BRACE20071970, BRACE20072810, BRACE20074010, BRACE20074470, BRACE20075020, BRACE20075380, BRACE20076410, BRACE20076630, BRACE20076850, BRACE20077610, BRACE20077640, BRACE20077980, BRACE20078680, BRACE20079530, BRACE20084430, BRACE20086550, BRACE20089600.
- BRACE20091880, BRAWH10000010, BRAWH10000370, BRAWH10000940, BRAWH10001620, BRAWH10001800, BRAWH20001090, BRAWH20004430, BRAWH20006970, BRAWH20009840, BRAWH20011290, BRAWH20011410, BRAWH20011660, BRAWH20014380, BRAWH20014840, BRAWH20015030, BRAWH20036930, BRAWH20038320, BRAWH20040950, BRAWH20052250, BRAWH20059980, BRAWH20087060, BRAWH20092610, CD34C20000510, CTONG20013660, CTONG20015330, CTONG20028160, CTONG20037820, CTONG20047160, DFNES20003350, FCBBF10006180, FCBBF10006750, FCBBF20005910, FCBBF20007330, FCBBF20008150, FCBBF20009400,
- FCBBF20015380, FEBRA20003780, FEBRA20004040, FEBRA20004150, FEBRA20004520, FEBRA20004910, FEBRA20006560, FEBRA20006900, FEBRA20007330, FEBRA20008090, FEBRA20008800, FEBRA20010930, FEBRA20012270, FEBRA20012450, FEBRA20012940, FEBRA20013510, FEBRA20014870, FEBRA20014920, FEBRA20015840, FEBRA20020860, FEBRA20021910, FEBRA20025250, FEBRA20031550, FEBRA20037070, FEBRA20041100, FEBRA20041910, FEBRA20057780, FEBRA20063150, FEBRA20066670, FEBRA20067930.

HCASM10000610, HCASM20002020, HEART20000990, HEART20004920, HHDPC20000950, HLUNG10000240, HLUNG10000370, HLUNG10001100, HLUNG20001160, HLUNG20001250, HLUNG20001420, HLUNG20001760, HLUNG20002550, HSYRA20003470, HSYRA20006290, HSYRA20008280, HSYRA20011030, HSYRA20013320, HSYRA20014200, HSYRA20015800, IMR3210000440, IMR3210001580, IMR3210002660, IMR3220007750, IMR3220008590, IMR3220009840, IMR3220014350, KIDNE10000080, KIDNE10001040, KIDNE10001430, KIDNE20000700, KIDNE20000850, KIDNE20001670, KIDNE20003150, KIDNE20003300, KIDNE20003490, KIDNE20004220, KIDNE20005170, KIDNE20005190, KIDNE20033050, KIDNE20033570, KIDNE20039410, KIDNE20042620, KIDNE20042950, KIDNE20044110, KIDNE20048280, KIDNE20049810, KIDNE20054000, KIDNE20054770, KIDNE20060530, KIDNE20060620, KIDNE20063530, KIDNE20063760, KIDNE20066520, KIDNE20067600, KIDNE20071860, KIDNE20073520, KIDNE20074220, KIDNE20075690, LIVER10000580, LIVER10000670, LIVER10001040, LIVER10001110, LIVER10001750, LIVER10005420, LIVER20004160, MAMGL10000320, MAMGL10001840, MESAN10000350, MESAN10001470, MESAN10001800, MESAN20001490, NB9N420000420, NHNPC20002060, NT2NE10000230, NT2NE10000830, NT2NE10001630, NT2NE20003270, NT2NE20003920, NT2NE20004550, NT2RE20004700, NT2NE20005500, NT2NE20012470, NT2NE20014350, NT2NE20016260, NT2NE20034080, NT2NE20047160, NT2NE20055170, NT2NE20057200, NT2RI20005970, NT2RI20009740, NT2RI20010100, NT2RI20014490, NT2RI20015400, NT2RI20015950, NT2RI20016570, NT2RI20018660, NT2RI20020220, NT2RI20021520, NT2RI20022430, NT2RI20022520, NT2RI20025300, NT2RI20030110, NT2RI20030510, NT2RI20031540, NT2RI20033010, NT2RI20033830, NT2RI20036780, NT2RI20042840, NT2RI20044420, NT2RI20049850, NT2RI20050870, NT2RI20051500, NT2RI20066820, NT2RI20068250, NT2RI20070480, NT2RI20070840, NT2RI20073030, NT2RI20074980, NT2RI20077540, NT2RI20078270, NT2RI20080500, NT2RI20081880, NT2RI20084810, NT2RI20085980, NT2RI20089420, NT2RI20092890, NT2RI20094060, NT2RP60000320, NT2RP60000390, NT2RP60001090, NT2RP70000690, NT2RP70002380, NT2RP70002590, NT2RP70003640, NT2RP70011660, NT2RP70015910, NT2RP70021510, NT2RP70023760, NT2RP70023790, NT2RP70026190, NT2RP70029820, NT2RP70040800, NT2RP70043730, NT2RP70047900, NT2RP70049250, NT2RP70055200, NT2RP70064080, NT2RP70071540, NT2RP70071770, NT2RP70073810, NT2RP70074220, NT2RP70075040, NT2RP70076170, NT2RP70079250, NT2RP70079750, NT2RP70081330, NT2RP70081370, NT2RP70083150, NT2RP70085500, NT2RP70090120, NT2RP70091490, NT2RP70091680, NT2RP70092360, NT2RP70093220, NT2RP70093730, NT2RP70094290, NT2RP70094810, NT2RP70094980, NT2RP70095070, NTONG10000980, NTONG10002140, NTONG10002570, NTONG20002650, NTONG20004920, NTONG20008000, NTONG20012220, OCBBF10000420, OCBBF20002310, OCBBF20009980, OCBBF20012100, PANCR10000210, PLACE50000670, PLACE50000680, PLACE50001050, PLACE50001130, PLACE60012810, PLACE60018860, PLACE60020160, PLACE60020840, PLACE60026990, PLACE60037050, PLACE60037450, PLACE60043960, PLACE60044540, PLACE60047380, PLACE60049930, PLACE60050290, PROST10002200, PROST10002720, PROST10005260, PROST10005360, PROST20000360, PROST20026820, PROST20029600, PROST20032320, PROST20033020, PROST20039220, PROST20044160, PROST20051430, PROST20054260, PROST20058800, PROST20059190, PROST20059430, PROST20069880, PROST20072370, PROST20073890, PUAEN10000570, PUAEN10003220, SALGL10001570, SKMUS20007740, SKNMC10000190, SKNMC10000290, SKNMC10002290, SKNMC10002510, SKNMC20011130, SKNMC20015030, SMINT10000160, SMINT10000420, SMINT10000570, SMINT10001180, SMINT20000180, SMINT20002770, SPLEN10000910, SPLEN20001340, SPLEN20002430, SPLEN20002700, SPLEN20003100, SPLEN20004960, STOMA10000520, STOMA10001170, STOMA20000320, STOMA20002570, SYNOV20001770, SYNOV20016480, TESTI10000420, TESTI10000960, TESTI10001270, TESTI10001380, TESTI20001770, TESTI20006000, TESTI20007620, TESTI20008830, TESTI20009090, TESTI20009700, TESTI20011340, TESTI20012370, TESTI20013520, TESTI20014200, TESTI20016210, TESTI20016710, TESTI20018520, TESTI20018620, TESTI20020020, TESTI20020810, TESTI20022510, TESTI20024230, TESTI20024650, TESTI20024670, TESTI20025800, TESTI20026320, TESTI20026980, TESTI20027000, TESTI20027070, TESTI20028660, TESTI20030370, TESTI20031930, TESTI20034190, TESTI20036490, TESTI20039980, TESTI20042870, TESTI20047120, TESTI20049940, TESTI20056900, TESTI20057420, TESTI20058600, TESTI20067740, TESTI20069780, TESTI20074800, TESTI20077490, TESTI20079510, TESTI20080200, TESTI20081440, TESTI20087740, TESTI20088470, TESTI20136910, THYMU10000830, THYMU10001760, THYMU10003290, THYMU10003820, THYMU10005580, TRACH10000630, TRACH10001000, TRACH10001400, TRACH20001850, TRACH20001960. TRACH20004200, TRACH20004960, TRACH20006650, TRACH20007670, TRACH20008980, TRACH20015920, UMVEN20001330, UTERU10000770, UTERU10000960, UTERU10001920, UTERU20000470, UTERU20003930.

[0226] The clones predicted to belong to the category of glycoprotein-related protein are the following 87 clones. BNGH410000340, BNGH410001180, BRACE20014920, BRACE20015080, BRACE20018590, BRACE20024680, BRACE20026350, BRACE20031100, BRACE20074470, BRAWH10000370, BRAWH2001090, BRAWH20011660, BRAWH20014840, BRAWH20059980, CD34C20000510, CTONG20013660, CTONG20028160, CTONG20037820,

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FCBBF20007330, FEBRA20007330, FEBRA20008800, FEBRA20014920, FEBRA20015840, FEBRA20057780, HEART20005060, HLUNG10001100, HLUNG20002550, HSYRA20013320, IMR3210002660, IMR3220007750, IMR3220013320, KIDNE20044110, KIDNE20063760, KIDNE20067600, KIDNE20073520, LIVER20000370, MESAN10000350, NT2NE10000830, NT2NE10001850, NT2NE20003270, NT2NE20016260, NT2RI20018660, NT2RI20025300, NT2RI20036780, NT2RI20077540, NT2RI20080500, NT2RI20085980, NT2RI20089420, NT2RI20092890, NT2RP7000690, NT2RP70004770, NT2RP70055200, NT2RP70081370, NT2RP70083150,
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- NT2RP70091490, NT2RP70092360, NT2RP70094980, NTONG10002140, OCBBF20002310, OCBBF20002770, PLACE50000680, PLACE50001130, PLACE60018860, PLACE60044540, PROST20018230, PROST20032320, PROST20073890, SALGL10001570, SKNMC20015030, SMINT10000160, SMINT20002770, SPLEN20001340, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370, TEST12001370
- TESTI10001270, TESTI10001380, TESTI20001770, TESTI20024230, TESTI20027070, TESTI20036490, TESTI20039980, TESTI20056900, TESTI20057420, TESTI20079510, THYMU10001760, TRACH10000740, TRACH10001250, TRACH20004200, UTERU20000470
  - [0227] The clones predicted to belong to the category of signal transduction-related protein are the following 46 clones.
- ADRGL20000740, ASTR010000180, BRACE20005770, BRACE20022020, BRACE20027360, BRACE20027920, BRAWH20006860, CTONG20005890, FEBRA20000350, HHDPC20000550, IMR3220003020, KIDNE20033730, KIDNE20040840, KIDNE20053360, KIDNE20062990, NT2RI20033440, NT2RI20058110, NT2RI20062100, NT2RI20073840, NT2RP70006240, NT2RP70043960, NT2RP70046870, NT2RP70061880, NT2RP70072520, NT2RP70081440, NT2RP70093700, NTONG10001820, PEBLM20004790, PLACE60026680, PROST20033400, PROST20043320, SKMUS10000220, SKMUS20016680, SPLEN20003570, TESTI20001540, TESTI20005910, TESTI20022560, TESTI20024980, TESTI20029120, TESTI20034980, TESTI20049820, TESTI20055840, THYMU10003590, THYMU20003690, TRACH20002500, TRACH20002890
- [0228] The clones predicted to belong to the category of transcription-related protein are the following 140 clones. 3NB6920010220, 3NB6920015110, 3NB6920015570, ADRGL10000650, BGGI120006840, BGGI120006930, BGGI120017140, BNGH410000800, BNGH420005320, BRACE10000930, BRACE20014550, BRACE20018550, BRACE20020910, BRACE20024090, BRACE20071740, BRAWH10000020, BRAWH10001640, BRAWH10001680, BRAWH20006330, BRAWH20009010,
- CTONG20025580, CTONG20028200, FCBBF10005980, FCBBF20000940, FCBBF20009510, FCBBF50002610, FEBRA20003970, FEBRA20003990, FEBRA20004540, FEBRA20009720, FEBRA20011460, FEBRA20017150, FEBRA20050140, FEBRA20064760, FEBRA20067360, FEBRA20069420, FEBRA20072800, HLUNG10000760, HLUNG20000680, HSYRA10001370.
- HSYRA20016310, IMR3210002420, IMR3220007420, KIDNE20000510, KIDNE20039940, KIDNE20061490, KIDNE20078110, NESOP10000870, NHNPC10001240, NHNPC20002120, NT2NE20002590, NT2NE20008090, NT2RI20003410, NT2RI20004120, NT2RI20004210, NT2RI20010830, NT2RI20018460, NT2RI20025410, NT2RI20025850, NT2RI20060710,
- NT2RI20067350, NT2RI20071330, NT2RI20074390, NT2RI20078790, NT2RI20087140, NT2RI20090650, NT2RI20092150, NT2RP60001000, NT2RP60001270, NT2RP70002710, NT2RP70008120, NT2RP70018560, NT2RP70024500, NT2RP70032030, NT2RP70036290, NT2RP70042040, NT2RP70045410, NT2RP70046560, NT2RP70055130, NT2RP70061620.
- 40 NT2RP70062960, NT2RP70064900, NT2RP70069860, NT2RP70075370, NT2RP70085570, NT2RP70087200, NT2RP70090190, NTONG20003340, NTONG20003630, NTONG20015500, OCBBF20011010, OCBBF20011240, OCBBF20015860, PEBLM20002480, PEBLM20002700, PEBLM20003080, PEBLM20003950, PLACE60002050, PLACE60005550, PLACE600021510,
- PLACE60030380, PROST20018230, PROST20031170, PROST20073170, PUAEN10001610, SALGL10000650, SKMUS10000640, SKMUS20014920, SKNMC20000650, SKNMC20002240, SKNMC20003560, SMINT10001000, SMINT20005450, SPLEN20000200, SPLEN20000720, SYNOV20010140, SYNOV20013740, SYNOV20014510, TESTI10000550, TESTI20001200,
  - TESTI20007070, TESTI20010490, TESTI20015560, TESTI20018150, TESTI20018790, TESTI20021490, TESTI20026760, TESTI20027890, TESTI2003071 TESTI20034130, TESTI20042290, TESTI20053960, TESTI20074640, TESTI20074660, TESTI20078640, THYMU10004590, TRACH20000790, TRACH20002370, TRACH20009440, UTERU10001600
    - [0229] The clones predicted to belong to the category of disease-related protein are the following 219 clones. Further, hit data of all the clones for Swiss-Prot, or GenBank, UniGene, or nr corresponded to genes or proteins which had been deposited in the Online Mendelian Inheritance in Man (OMIM), which is the human gene and disease database, (the OMIM Number is shown in the parenthesis after the Clone Name).
  - ADRGL10000020 (605332), ADRGL10001600 (201910), ADRGL20000740 (300118), ASTR020004170 (605937), BGGI120006840 (604480), BGGI120010970 (602346), BGGI120017140 (194631), BNGH410001770 (146690), BNGH420005320 (601260), BRACE10001870 (157132), BRACE20006980 (106410), BRACE20007180 (114160),

BRACE20014550 (140580), BRACE20018550 (109560), BRACE20018590 (602644), BRACE20027550 (179715), BRACE20027720 (138760), BRACE20076850 (605209), BRACE20086550 (603540), BRAWH1000020 (605678), BRAWH10001640 (606043), BRAWH20001770 (138450), BRAWH20005030 (179715), BRAWH20005220 (603747), BRAWH20006330 (194500), BRAWH20006860 (602958), BRAWH20009840 (601258), BRAWH20011660 (230500; 230600;230650;253010), CD34C20000510 (600031), CTONG20005890 (603583), CTONG20019110 (603486), CTONG20024180 (602895), CTONG20025580 (601856), CTONG20037820 (602729), CTONG20055530 (106410), FCBBF20000940 (601408), FCBBF20009510 (194531), FCBBF40002820 (130410), FEBRA20001050 (600025), FEBRA20003990 (601781),

FEBRA20004150 (126650;214700), FEBRA20004540 (194558), FEBRA20009720 (602277), FEBRA20010930 (603878), FEBRA20011460 (603900), FEBRA20050790 (176879), FEBRA20057880 (604362), FEBRA20064760 (602277), FEBRA20067930 (602921), FEBRA20070170 (606098), FEBRA20075510 (179513), FEBRA20075660 (179715), HCASM20002140 (123834), HEART20004480 (191045;115195), HLUNG10001050 (310400), HLUNG20000680 (300024), HSYRA10001370 (602277), HSYRA20006400 (601278), HSYRA20013320 (146732), HSYRA20016310 (604080),

IMR3210000440 (601890), IMR3220007910 (313440), KIDNE10001040 (603217), KIDNE20003150 (602417), KIDNE20033730 (605216), KIDNE20042950 (120160), KIDNE20044110 (605239), KIDNE20050420 (214500), KIDNE20059080 (604276), KIDNE20063760 (231950), KIDNE20078110 (603430), LIVER10002300 (161015), LIVER10004330 (603197), LIVER20000330 (191161), LIVER20000370 (138670), MAMGL10001780 (603403), MESAN10001800 (606048), MESAN20002910 (142810), MESAN20005010 (602769), NB9N410001350 (179508), NHNPC10000840 (604819), NHNPC20002120 (194558), NT2NE10000730 (601905), NT2NE20002990 (147625), NT2NE20003690 (232000), NT2NE20005170 (603330), NT2NE20005360 (150370), NT2NE20006580 (605969), NT2NE20008090 (603899), NT2NE20013720 (180480), NT2NE20016340 (602184), NT2NE20014500 (190370), NT2RI20004120 (600140), NT2RI20004210 (314997), NT2RI20010910 (601940), NT2RI20014500 (190370), NT2RI20020410 (168730;180990), NT2RI20029580 (605689), NT2RI20031540 (300061), NT2RI20033440 (601014), NT2RI20070960 (311030), NT2RI20074980 (603105), NT2RI20077540 (300112), NT2RI20080500 (142461),

NT2RI20041900 (179715), NT2RI20056470 (123940), NT2RI20057230 (601940), NT2RI20067030 (603577), NT2RI20070960 (311030), NT2RI20074980 (603105), NT2RI20077540 (300112), NT2RI20080500 (142461), NT2RI20083960 (605612), NT2RI20084810 (603099), NT2RI20092150 (600834), NT2RI20092890 (603104), NT2RP60000350 (605612), NT2RP60001000 (314995), NT2RP60001230 (600025), NT2RP7000690 (158340; 113720), NT2RP70004250 (160776), NT2RP70028750 (179838), NT2RP70029060 (140571), NT2RP70032030 (602277),

NT2RP70036290 (600005;209920) NT2RP70042600 (160776), NT2RP70046560 (602410), NT2RP70049250 (601703), NT2RP70055020 (604581), NT2RP70062960 (133540), NT2RP70063040 (604061), NT2RP70065270 (300111), NT2RP70069860 (602277), NT2RP70071770 (603046), NT2RP70073810 (601439), NT2RP70074220 (313440), NT2RP70075370 (109092), NT2RP70079250 (602346), NT2RP70081440 (601335), NT2RP70090120 (602727), NT2RP70090190 (194558), NT2RP70093220 (300008;300009;310468), NT2RP70094980 (135820), NTONG10002460 (600856),

NTONG20003630 (600140), NTONG20015500 (604077), OCBBF10001180 (191161), OCBBF20008240 (187790), PEBLM10000340 (133450), PEBLM20002480 (300024), PEBLM20003080 (604077), PEBLM20003950 (600834), PLACE50000800 (601797), PLACE60002050 (600013), PLACE60003790 (603403), PLACE60014430 (603707), PROST10001670 (313440), PROST10005360 (602346), PROST20002730 (601985;188550), PROST20032320 (253220), PROST20033400 (300203), PROST20062600 (601940), PROST20072890 (191161), PROST20073890 (192240)

PROST20085160 (191030;164970), SALGL10001570 (603743), SKMUS10000140 (191340), SKMUS10001180 (601402), SKMUS10001290 (604055), SKMUS20000740 (605196), SKMUS20003900 (604850), SKMUS20007240 (604300), SKMUS20016340 (163906), SKNMC10002510 (605452), SKNMC20000650 (604078), SKNMC20003220 (117140), SMINT10000420 (601615), SMINT10000570 (604814), SMINT10001000 (603851), SMINT10001030 (605759), SMINT20004000 (601278), SPLEN10001430 (163905), SPLEN20001970 (601940), STOMA20000880 (147220),

STOMA20003960 (300111), SYNOV20013740 (604076), SYNOV20014510 (600661), SYNOV20016480 (131222; 603041), TESTI10001270 (601313;173900), TESTI10001310 (186982), TESTI20001200 (194510), TESTI20001770 (146650), TESTI20002530 (605440), TESTI20006000 (179838), TESTI20006990 (602591), TESTI20007620 (126650;214700), TESTI20008830 (160794), TESTI20011800 (190370), TESTI20012690. (109720), TESTI20015120 (604700), TESTI20018520 (602346), TESTI20018790 (300024), TESTI20021490 (604073), TESTI20025160 (300097).

TESTI20027070 (173335), TESTI20027290 (300127), TESTI20029120 (600855), TESTI20033250 (168730), TESTI20049820 (176894), TESTI20053960 (604074), TESTI20068660 (603395), TESTI20071830 (605769), TESTI20074640 (603899), TESTI20079510 (116930), TESTI20086570 (300153), TESTI20140360 (170100), THYMU10000830 (600857), THYMU10001760 (116930), THYMU10003590 (602857), THYMU10004910 (604908),

TRACH20002370 (602277), UTERU10000960 (603931), UTERU20000470 (602070) [0230] The clones predicted to belong to the category of enzyme and/or metabolism-related protein are the following 168 clones. 3NB6920002810, ADRGL10001600, ADRGL10001650, BGGI120005330, BNGH410000340, BNGH410001770, BRACE10000420, BRACE20015080, BRACE20022020, BRACE20024680, BRACE20026850, BRACE20027360, BRACE20027720. BRACE20027920. BRACE20071380. BRACE20084430. BRAWH20001770. BRAWH20006510. BRAWH20006860, BRAWH20009840, BRAWH20011660, BRAWH20014180, BRAWH20014840, BRAWH20036890, BRAWH20059980, BRAWH20069890, BRAWH20089560, CTONG20013660, CTONG20019110, DFNES20002120, FCBBF20007330, FCBBF20015380, FEBRA20000350, FEBRA20001290, FEBRA20003110, FEBRA20024420, FEBRA20041100, FEBRA20045920, FEBRA20050790, FEBRA20052160, FEBRA20062700, FEBRA20063150, HEART20000350, HHDPC20000550, HHDPC20004550, HLUNG10001050, HLUNG20002550, HSYRA10001680, HSYRA2005100, HSYRA20015740, IMR3220008380, IMR3220009190, IMR3220012180, IMR3220013170, KIDNE2000410, KIDNE20003490, KIDNE20004220, KIDNE20005130, KIDNE20033050, KIDNE20040840, KIDNE20046810, KIDNE20056290, KIDNE20060530, KIDNE20063760, KIDNE20068800, KIDNE20073280, KIDNE20073520, KIDNE20078100, LIVER10000670, LIVER10002300, MAMGL10001780, MESAN20002910, MESAN20005010, NT2NE10000730, NT2NE10001850, NT2NE20002140, NT2NE20003270, NT2NE20003690, NT2NE20005860, NT2NE20013720, NT2NE20016340, NT2NE20016660, NT2RI10000480, NT2RI20010100, NT2RI20015400. NT2RI20020220. NT2RI20025300. NT2RI20033010. NT2RI20036780. NT2RI20037510. NT2RI20051500, NT2RI20068550, NT2RI20073840, NT2RI20074980, NT2RI20084810, NT2RI20087910, NT2RP70004770, NT2RP70006240, NT2RP70011660, NT2RP70026190, NT2RP70062960, NT2RP70072520, NT2RP70076100. NT2RP70081440. NT2RP70084060. NT2RP70085570. NT2RP70093700. NTONG10001820. OCBBF20008240, OCBBF20012100, OCBBF20014080, OCBBF20014940, PANCR10000210, PEBLM20004790, PLACE50001050, PLACE50001130, PLACE60003790, PLACE60012810, PLACE60018860, PLACE60044540, PROST20031170, PROST20032320, PROST20033400, PROST20051210, PROST20064500, SKMUS10001290, SKMUS10001770, SKMUS20000740, SKMUS20007240, SKMUS20008630, SKMUS20009330, SKMUS20011290, SKNSH10001740, SKNSH20003470, SMINT10000160, SPLEN20001340, STOMA10001860, STOMA20001210, STOMA20004820, SYNOV20016480, TESTI10000700, TESTI10001380, TESTI20001540, TESTI20005910, TESTI20012690, TESTI20018270, TESTI20022560, TESTI20027070, TESTI20029120, TESTI20034190, TESTI20034980, TESTI20040000, TESTI20042070, TESTI20042950, TESTI20047120, TESTI20049820, TESTI20138320, TESTI20140360, TESTI30000020, THYMU10000830, THYMU10004910, THYMU20003170, THYMU20003690, TRACH20000150, TRACH20004720, TRACH20004970, TRACH20009260, UTERU10000960 [0231] The clones predicted to belong to the category of cell division and/or cell proliferation-related protein are the following 23 clones. BGGI120001610. BRACE20027550. BRACE20076850, BRAWH20005030, BRAWH20005220, FEBRA20075660, HCASM20002140, HLUNG10000640, IMR3220009730, NT2NE20003840, NT2RI20006850, NT2RI20041900, NT2RI20058110, NTONG10002460, NTONG20008780, SKMUS20016340, SKNMC20003220, SPLEN10001430, TESTI10001680, TESTI20001840, TESTI20021050, TESTI20035120, TESTI20057310 [0232] The clones predicted to belong to the category of cytoskeleton-related protein are the following 60 clones. ADRGL10000020, BRACE20006980, BRACE20008850, BRACE20027960, BRACE20074470, BRACE20076630, BRACE20078820, BRACE20093070, BRAWH20000480, BRAWH20066220, CTONG20019550, CTONG20028160, CTONG20055530, DFNES20002680, FCBBF20005910, FEBRA20007720, FEBRA20008810, FEBRA20034290, FEBRA20043290, FEBRA20072000, HEART20004480, HEART20005200, HLUNG10001100, HSYRA20006050, IMR3220007910, KIDNE20040840, KIDNE20052960, NT2RI20014090, NT2RI20032220, NT2RI20058510, NT2RI20090660, NT2RP70000690, NT2RP70004250, NT2RP70028750, NT2RP70042600, NT2RP70049250. NT2RP70074220, NTONG20009660, OCBBF20011760, OCBBF20015280, PEBLM10000680, PROST10001670, PROST20033380, TESTI10000420, TESTI10000510, TESTI20003560, TESTI20004350, TESTI20006000, TESTI20006990, TESTI20008490, TESTI20008830, TESTI20011410, TESTI20015110, TESTI20016610, TESTI20020570, TESTI20024230, TESTI20031090, TESTI20031170, TESTI20039140, TESTI20078720 [0233] The clones predicted to belong to the category of nuclear protein and/or RNA synthesis-related protein are the following 59 clones. 3NB6920002810, 3NB6920015280, BGGI120005440, BRACE10001150, BRACE20024780, BRACE20027550, BRAWH20005030, BRAWH20014180, BRAWH20069890, CTONG20024180, FEBRA20001290, FEBRA20075660, HEART20003090, HLUNG10000640, HSYRA10001680, HSYRA20005100, IMR3220008630, IMR3220012180, MAMGL10001780, NT2NE10001850, NT2NE20002140, NT2NE20003840, NT2NE20016660, NT2NE20054410, NT2RI20002820, NT2RI20006850, NT2RI20010910, NT2RI20025540, NT2RI20041900, NT2RI20053350, NT2RI20057230, NT2RI20060720, NT2RI20067030, NT2RI20068550, NT2RI20078840, NT2RI20087490,

NT2RP70004770, NT2RP70013060, NT2RP70076430, NTONG20008780, PEBLM10000340, PLACE50000580,

- PLACE60003790, PROST20001760, PROST20062600, SKMUS10000220, SKMUS20016340, SKNMC20003220, SPLEN10001430, SPLEN20001970, TESTI10001680, TESTI20002530, TESTI20007840, TESTI20021050, TESTI20029120, TESTI20035120. TESTI20057310, TRACH20003930, TRACH20012890
- [0234] The clones predicted to belong to the category of protein synthesis and/or transport-related protein are the following 24 clones.
  - BRACE20078680, FEBRA20075510, IMR3220008380, KIDNE20005190, KIDNE20050420, MESAN20002910, NB9N410001350, NT2NE20005360, NT2RI20032050, NT2RI20032220, NT2RP70000760, NT2RP70076430, NT2RP70093940, OCBBF20008240, PLACE50000580, PROST20000530, SKMUS20000740, SKMUS20008630, TESTI20007840, TESTI20015120, TESTI20018690, TESTI20078720, THYMU10005580, UMVEN20001330
- [0235] The clones predicted to belong to the category of cellular defense-related protein are the following 6 clones. BRACE20014550, NT2RI20037510, NT2RI20053350, NT2RP70029060, NT2RP70062960, PLACE50001700
  [0236] The clones predicted to belong to the category of development and/or differentiation-related protein are the following 19 clones.
- BGGI120006930, CTONG20028200, FCBBF50002610, FEBRA20014920, FEBRA20017150, FEBRA20060920, MAMGL10001820, NESOP10000870, NHNPC10001240, NT2RI20078790, NT2RP7008120, NT2RP70018560, NT2RP70045410, OCBBF20002770, SALGL10000650, SMINT10001000, TESTI10000550, TESTI20026760, TESTI20078140
  - [0237] The clones predicted to belong to the category of DNA-binding and/or RNA-binding protein are the following 158 clones.
- 3NB6920002810, 3NB6920010220, 3NB6920015110, 3NB6920015570, ADRGL10000650, BGGI120006840, BGGI120006930, BNGH410000800, BNGH420005320, BRACE20014550, BRACE20020910, BRACE20024090, BRACE20024780, BRACE20071740, BRAWH10001640, BRAWH10001680, BRAWH20000340, BRAWH20006330, BRAWH20009010. BRAWH20014180,
- BRAWH20069890, CTONG20025580, CTONG20028200, D3OST20001840, FCBBF10005980, FCBBF20009510, FCBBF50002610, FEBRA20003970, FEBRA20003990, FEBRA20004540, FEBRA20008560, FEBRA20009720, FEBRA20017150, FEBRA20017900, FEBRA20050140, FEBRA20064760, FEBRA20067360, FEBRA20069420, FEBRA20072800, HEART20003090,
  - HLUNG10000760, HSYRA10001370, HSYRA20016310, IMR3210002420, IMR3220007420, IMR3220008630, KIDNE2000510, KIDNE20039940, KIDNE20061490, KIDNE20078110, NESOP10000870, NHNPC10000840, NHNPC10001240, NHNPC20002120, NT2NE20002590, NT2NE20003840, NT2NE20008090, NT2NE20016660,
  - NT2NE20054410, NT2RI20003410,
    NT2RI20004210, NT2RI20006850, NT2RI20010830, NT2RI20010910, NT2RI20025410, NT2RI20025850,
    NT2RI20057230, NT2RI20060710, NT2RI20067350, NT2RI20071330, NT2RI20074390, NT2RI20078790,
    NT2RI20078840, NT2RI20087140, NT2RI20087490, NT2RI20090650, NT2RP60001000, NT2RP60001270,
- NT2RP70002710, NT2RP70008120, NT2RP70013060, NT2RP70018560, NT2RP70024500, NT2RP70032030, NT2RP70042040, NT2RP70045410, NT2RP70046560, NT2RP70055130, NT2RP70061620, NT2RP70062960, NT2RP70064900, NT2RP70069860, NT2RP70075370, NT2RP70081670, NT2RP70085570, NT2RP70087200, NT2RP70090190, NTONG20003340, NTONG20008780, NTONG20015500.
- 40 OCBBF20011010, OCBBF20015860, PEBLM10000340, PEBLM20001120, PEBLM20002700, PEBLM20003080, PLACE60002050, PLACE60005550, PLACE60021510, PLACE60030380, PROST20001760, PROST20003250, PROST20018230, PROST20031170, PROST20062600, PROST20073170, SALGL10000650, SKMUS10000640, SKMUS20014920, SKMUS20016340,
- SKNMC20000650, SKNMC20002240, SKNMC20003220, SKNMC20003560, SMINT10001000, SMINT20005450, SPLEN10001430, SPLEN20000200, SPLEN20000720, SPLEN20001970, SYNOV20010140, SYNOV20013740, SYNOV20014510, TESTI10000550, TESTI20001200, TESTI20007070, TESTI20010490, TESTI20013450, TESTI20015560, TESTI20018150,
  - TESTI20021050, TESTI20021490, TESTI20026760, TESTI20027890, TESTI20030710, TESTI20033270, TESTI20034130, TESTI20035120, TESTI20053960, TESTI20074640, TESTI20074660, TESTI20078640,
- THYMU10004590, TRACH20000790, TRACH20002370, TRACH20009440, TRACH20012890, UTERU10001600 [0238] The clones predicted to belong to the category of ATP binding and/or GTP-binding protein are the following 63 clones.
  - 3NB6920002810, BNGH410000390, BRACE20022020, BRACE20028120, BRACE20071380, BRAWH20000480, BRAWH20006860, BRAWH20066220, CTONG20013200, DFNES20002680, FEBRA20043290, FEBRA20052160, FEBRA20072000, FEBRA20075510, HHDPC20000550, HLUNG20001160, HSYRA10001680, HSYRA20005100,
- HSYRA20006050, KIDNE20040840, MAMGL10001780, MESAN20002910, NB9N410001350, NT2NE20003690, NT2NE20005170, NT2NE20016660, NT2NE20055170, NT2RI20068550, NT2RI20073840, NT2RP70004250, NT2RP70011660, NT2RP70029060, NT2RP70036290, NT2RP70042600, NT2RP70046870, NT2RP70062960.

NT2RP70081370, NT2RP70081440, NT2RP70093700, OCBBF20008240, OCBBF20015280, PEBLM20004790, PLACE50001700, PLACE60003790, PROST20018990, PROST20033400, SKMUS20008630, SMINT10000420, TESTI20001540, TESTI20003560, TESTI20005910, TESTI20006950, TESTI20006990, TESTI20008490, TESTI20015110, TESTI20016610, TESTI20022560, TESTI20029120, TESTI20034980, TESTI20042290, TESTI20047120, TESTI20049820, TESTI20057310

[0239] Among the clones other than the ones shown above, NTONG10001300 is a clone which was predicted to highly possibly belong to the category of secretory protein and/or membrane protein based on the result of domain search by Pfam.

FEBRA20017060, NT2RI20066790, SMINT10000710

[0240] The three clones shown above are clones which were predicted to highly possibly belong to the category of glycoprotein-related protein based on the result of domain search by Pfam.

BRACE20080970, BRACE20092120, BRAWH10001300, FEBRA20019890, KIDNE20031850, KIDNE20060140,

MESAN20000920, NB9N410000470, NT2RI20071480, NT2RI20078910, NT2RP70088550, NTONG20016120, OCBBF10000910, PROST20094830, SKNSH10003010, SPLEN20002670, TESTI20031960, TESTI20036250,

15 TESTI20037810, TESTI20083870, TESTI20177400

[0241] The 21 clones shown above are clones which were predicted to highly possibly belong to the category of signal transduction-related protein based on the result of domain search by Pfam. 3NB692009120. 3NB6920014710. BRACE10001660. BRACE20083850. BRAWH20004760. BRAWH20012030.

CTONG20011390, CTONG20018200, FEBRA20007870, FEBRA20043250, HHDPC20003150, NT2RI10000270, NT2RI20036950, NT2RI20053680, NT2RI20072540, NT2RI20083360, NT2RP70030550, OCBBF20013070, OCBBF20015270, PLACE60046630, PROST10003430, PROST20067370, SKMUS10001040, SKNMC20015960, TESTI20030050, TESTI20033540, TESTI20035890, TESTI20068720, TRACH20004110

[0242] The 29 clones shown above are clones which were predicted to highly possibly belong to the category of transcription-related protein based on the result of domain search by Pfam.

BNGH410001900, BRACE20080970, BRACE20092120, BRAWH20093600, FEBRA20003770, FEBRA20024290, HLUNG10000990, KIDNE20004030, MESAN20000920, NB9N420001040, NT2NE10000140, NT2NE20001740, NT2RI20050610, NT2RI20055640, NT2RI20072540, NT2RI20074690, NT2RP60000860, NT2RP70036470, NT2RP70036800, NT2RP70072210, NT2RP70074060, NT2RP70084870, NTONG10001300, NTONG10002640, NTONG20016120, OCBBF10000910, OCBBF10001190, OCBBF20007190, SKMUS20001170, SKMUS20016620, SKNMC20000970, SKNMC20015960, SYNOV10001280, TESTI20002380, TESTI20006270, TESTI20013300, TESTI20031520, TESTI20036250, TESTI20037810, TESTI20064830, TESTI20083870, TRACH20006750, TRACH20016070

[0243] The 43 clones shown above are clones which were predicted to highly possibly belong to the category of enzyme and/or metabolism-related protein based on the result of domain search by Pfam.

35 NT2RI20064120

[0244] The clone shown above is a clone which were predicted to highly possibly belong to the category of cell division and/or cell proliferation-related protein based on the result of domain search by Pfam. BRACE20083800, KIDNE20004970

[0245] The two clones shown above are clones which were predicted to highly possibly belong to the category of cytoskeleton-related protein based on the result of domain search by Pfam.

3NB6920009120, 3NB6920014710, BRACE10001660, BRACE20083850, BRAWH20004760, BRAWH20012030, BRAWH20064500, CTONG20011390, CTONG20018200, FEBRA20007870, FEBRA20043250, HCASM20003070, HHDPC20003150, NT2RI10000270, NT2RI20036950, NT2RI20053680, NT2RI20072540, NT2RI20083360, NT2RP70012310, NT2RP70030550, NT2RP70036470, OCBBF20013070, OCBBF20015270, PLACE60046630, PROST10003430, PROST20067370, SKMUS10001040, SKNMC20000970, SKNMC20015960, TESTI20030050.

TESTI20032280, TESTI20033540, TESTI20035890, TESTI20068720, TRACH20004110 **[0246]** The 34 clones shown above are clones which were predicted to highly possibly belong to the category of DNA-binding and/or RNA-binding protein based on the result of domain search by Pfam.

NT2RI20064120

[0247] The clone shown above is a clone which was predicted to highly possibly belong to the category of ATP-binding and/or GTP-binding protein based on the result of domain search by Pfam.

[0248] The 178 clones shown below are clones which were unassignable to any of the above-mentioned categories, but have been predicted to have some functions based on homology search for their full-length nucleotide sequences and motif search in their deduced ORFs. Clone Name, Definition in the result of homology search or Motif Name in the motif search, demarcated by a double slash mark (//), are shown below.

3NB6910001160//STEROIDOGENIC ACUTE REGULATORY PROTEIN PRECURSOR.

3NB6910001290//KRAB box

3NB6910001730//RI01/ZK632.3/MJ0444 family

3NB6920014330//Domain of unknown function

ASTR020000950//SNAP-25 family

BNGH410000030//R.norvegicus trg mRNA.

BNGH410000290//SPRY domain

5 BRACE20005250//DRR1 PROTEIN (TU3A PROTEIN).

BRACE20005650//ATP synthase ab C terminal

BRACE20013750//Hepatitis C virus non-structural protein NS4a

BRACE20014770//HUNTINGTIN ASSOCIATED PROTEIN 1 (HAP1).

BRACE20016730//Mus musculus mdgl-1 mRNA, complete cds.

10 BRACE20017370//P.vivax pval gene.

BRACE20019440//Protein of unknown function DUF82

BRACE2DD2431D//P53-INDUCED PROTEIN 11.

BRACE20028960//Mus musculus mRNA for Ca2+ dependent activator protein for secretion, complete cds.

BRACE20077840//Putative Protein that mediates attachment of autophagosomes to microtubules, by similarity to yeast

15 aut2 [Schizosaccharomyces pombe].

BRACE20093610//Bacterial type II secretion system protein

BRAWH20003230//Proline rich protein

BRAWH20009440//Arabidopsis thaliana pollenless3 (178) gene, complete cds;

beta-9 tubulin (TUB9) gene, partial cds; and unknown gene.

BRAWH20014610//TS-N domain// UBA domain

BRAWH20060440//PPR repeat

BRAWH20076050//LORICRIN.

CTONG20027210//VACUOLAR PROTEIN SORTING-ASSOCIATED PROTEIN VPS13.

CTONG20028030//Domain of unknown function DUF19// Ribosomal protein S18

25 CTONG20064490//Drosophila melanogaster 26S proteasome regulatory complex subunit p42A mRNA, complete cds.

DFNES20004320//Homo sapiens ubiquitous TPR-motif protein Y isoform (UTY) gene, partial cds; alternatively spliced.

FCBBF10006870//Mus musculus Rap2 interacting protein 8 (RPIP8) mRNA, complete cds.

FCBBF20002320//T-box

FCBBF20002760//ALPHA SCRUIN.

FCBBF20012110//Leishmania major partial ppg1 gene for proteophosphoglycan.

FCBBF20016720//Domain of unknown function DUF94

FEBRA20000530//Drosophila melanogaster Diablo (dbo) mRNA, complete cds.

FEBRA20005360//Homo sapiens paraneoplastic cancer-testis-brain antigen (MA5) mRNA, complete cds.

FEBRA20007570//Homo sapiens BM-009 mRNA, complete cds.

35 FEBRA20011330//26S PROTEASOME REGULATORY SUBUNIT S3 (PROTEASOME SUBUNIT P58).

FEBRA20030540//Halocynthia roretzi mRNA for HrPET-1, complete cds.

FEBRA20044900//R.norvegicus mRNA for CPG2 protein.

FEBRA20048180//DRR1 PROTEIN (TU3A PROTEIN).

FEBRA20053800//Homo sapiens ubiquitous TPR-motif protein Y isoform (UTY) gene, partial cds; alternatively spliced.

40 FEBRA20057260//TBC domain

FEBRA20068730//Trg protein

HCASM10000210//Plasmodium berghei strain NYU2 merozoite surface protein-1 mRNA, partial cds.

HCASM20005360//Macrophage migration inhibitory factor

HEART20004110//POT family

45 HEART20005680//Nerve growth factor family

HHDPC20001150//Mus musculus putative secreted protein ZSIG37 (Zsig37) mRNA, complete cds.

HHDPC20001490//Mus musculus partial mRNA for muscle protein 534 (mg534 gene). HHDPC20004560//2S seed storage family

HHDPC20004620//FAD binding domain

50 HSYRA10001190//PROBABLE GYP7 PROTEIN (FRAGMENT).

HSYRA10001780//Alpha-2-macroglobulin family N-terminal region

HSYRA20001350//CELL POLARITY PROTEIN TEA1.

HSYRA20014760//von Willebrand factor type A domain

HSYRA20016210//HesB-like domain

55 IMR3220002230//HINT PROTEIN (PROTEIN KINASE C INHIBITOR 1) (PKCI-1) (17 KD (NHIBITOR OF PROTEIN KINASE C).

IMR3220014910//Rattus norvegicus tricarboxylate carrier-like protein mRNA, complete cds.

KIDNE10001520//Mus musculus yolk sac permease-like molecule 1 (YSPL-1) mRNA, complete cds.

KIDNE20003750//Mus musculus mRNA for granuphilin-a, complete cds.

KIDNE20005740//Staphylococcus epidermidis putative cell-surface adhesin SdrF (sdrF) gene, complete cds.

KIDNE20043440//Vacuolar protein sorting-associated protein - fission yeast

KIDNE20056760//NEURONAL PROTEIN.

5 KIDNE20060300//Gallus gallus syndesmos mRNA, complete cds.

KIDNE20062480//Scorpion short toxins

KIDNE20067750//Homo sapiens PTOV1 (PTOV1) gene, complete cds.

LIVER10000790//Rattus norvegicus fertility related protein WMP1 mRNA, complete cds.

MAMGL10000560//K-box region

MESAN10001010//Rat trg gene product

NB9N420004950//PROBABLE NUCLEAR ANTIGEN.

NT2NE10000180//SUPPRESSOR PROTEIN SRP40.

NT2NE10000630//Gallus gallus Dach2 protein (Dach2) mRNA, complete cds.

NT2NE20007630//Matrix protein (MA), p15

15 NT2NE20013370//Homo sapiens estrogen-responsive B box protein (EBBP) mRNA, complete cds.

NT2NE20016970//MSF1 PROTEIN.

NT2NE20035690//Homo sapiens phosphoinositol 3-phosphate-binding protein-2 (PEPP2) mRNA, complete cds.

NT2NE20053710//Ank repeat

NT2RI20006690//TRICHOHYALIN.

NT2RI20013420//Mus musculus cyclin ania-6b mRNA, partial cds.

NT2RI20013850//Homo sapiens P381P (P38IP) mRNA, complete cds.

NT2RI20015190//Homo sapiens misato mRNA, partial cds.

NT2RI20016210//Probable transposase - human transposon MER37

NT2RI20022700//X123 protein

25 NT2RI20025170//Homo sapiens PAR3 (PAR3) mRNA, complete cds.

NT2RI20029260//ARP2/3 COMPLEX 16 KDA SUBUNIT (P16-ARC).

NT2RI20029700//EF hand// EF hand

NT2RI20043040//Homo sapiens NY-REN-2 antigen mRNA, complete cds.

NT2RI20046060//K+ channel tetramerisation domain

NT2RI20061830//Proline-rich protein M14 precursor

NT2RI20065060//Drosophila melanogaster rudimentary gene, intron 3; anon-15AB gene, complete cds.

NT2RI20077230//Homo sapiens BR13 mRNA, complete cds.

NT2RI20082210//CORNIFIN B (SMALL PROLINE-RICH PROTEIN 1B) (SPR1B) (SPR1 B).

NT2RI20088120//AXONEME-ASSOCIATED PROTEIN MST101(2).

35 NT2RI20091440//SPRY domain

NT2RP60000080//Homo sapiens Pig11 (PIG11) mRNA, complete cds.

NT2RP60000720//Pinus taeda clone PtaAGP6 putative arabinogalactan protein mRNA, complete cds.

NT2RP70009060//Medicago truncatula mRNA for 85p protein (85p gene).

NT2RP70010800//Mus musculus mRNA for MILI (Miwi like), complete cds.

40 NT2RP70022430//Tax1-binding protein TRX - human.

NT2RP70028290//Scm-related gene containing four mbt domains [Mus musculus].

NT2RP70033040//YceA protein homolog ybfQ - Bacillus subtilis.

NT2RP70036320//Microfilarial sheath protein

NT2RP70039600//Calpain inhibitor repeat

NT2RP70042330//HYPOTHETICAL PROTEIN MJ0941.

NT2RP70049150//Mus musculus mRNA for UBE-1c1, UBE-1c2, UBE-1c3, complete cds.

NT2RP70052050//Human transformation-related protein mRNA, 3' end.

NT2RP70084410//Polybromo 1 protein - chicken

NTONG10000520//Rattus norvegicus mRNA for Kelch related protein 1 (krp1 gene).

NTONG10001230//Mus msuculus mRNA, partial cds, clone CLFEST42.

OCBBF10001220//RING CANAL PROTEIN (KELCH PROTEIN).

OCBBF20010750//Spectrin repeat

OCBBF20011400//VACUOLAR PROTEIN SORTING-ASSOCIATED PROTEIN VPS8.

OCBBF20014020//Mus musculus NSD1 protein mRNA, complete cds.

55 PEBLM10001440//Trg

PEBLM20002130//Mus musculus genes for integrin aM290, hapsin, partial and complete cds.

PLACE50000370//Homo sapiens mRNA for hVPS11, complete cds.

PLACE60004290//Gag P30 core shell protein

PLACE60021020//Integrase Zinc binding domain// Integrase Zinc binding domain// DnaJ central domain (4 repeats) PLACE60024190//TRICHOHYALIN.

PLACE60032040//Hirudin

PLACE60033990//SP1DROIN 1 (DRAGL INE SILK FIBROIN 1) (FRAGMENT).

PLACE60038500//Homo sapiens mitochondrial solute carrier mRNA, complete cds.

PLACE60043970//Takifugu rubripes retinitis pigmentosa GTPase regulator-like protein gene, partial cds.

PLACE60044640//Human placenta (Diff48) mRNA, complete cds.

PROST20023380//Cca3 protein

PR0ST20034720//IMMEDIATE-EARLY PROTEIN.

10 PR0ST20079740//ANTER-SPECIFIC PROLINE-RICH PROTEIN APG (PROTEIN CEX) (FRAGMENT).

SALGL10000050//Permeases for cytosine/purines, uracil, thiamine, allantoin

SALGL10000470//NG36 [Homo sappiens]

SKMUS20002710//Hepatitis C virus capsid protein

SKMUS20003650//Human (p23) mRNA, complete cds.

15 SKMUS20004580//Mus musculus N-RAP mRNA, complete cds.

SKMUS20009020//BR01 PROTEIN.

SKMUS20009540//Homo sapiens F-box protein Fbx25 (FBX25) mRNA, partial cds.

SKMUS20010080//Mus musculus mRNA for a skeletal muscle and cardiac protein.

SKMUS20011470//Mus musculus RP42 mRNA, complete cds.

20 SKMUS20013640//Laminin EGF-like (Domains III and V)

SKMUS20015430//Homo sapiens HDCMC29P mRNA, partial cds.

SKNMC20010570//F-box domain.

SMINT20001450//Halocynthia roretzi mRNA for HrPET-3, complete cds.

SMINT20002270//Disintegrin// Trans-activation protein X

25 SMINT20003960//A kinase anchor protein AKAP-KL isoform 2

STOMA20002890//Adaptin N terminal region

SYNOV20002910//Arabinogalactan-like protein

SYNOV20008200//Trichoplusia ni transposon IFP2.

TESTI10000250//M.musculus mRNA for testis-specific protein, DDC8.

TESTI10000640//Fugu rubripes sex comb on midleg-like 2 protein (SCML2) gene, complete cds.

TESTI10001910//Homo sapiens 88-kDa Golgi protein (GM88) mRNA, complete cds.

TESTI20000440//TRICHOHYALIN.

TESTI20002070//NIFU-LIKE PROTEIN.

TESTI20002080//Homo sapiens mRNA for Gab2, complete cds.

35 TESTI20014120//TRICHOHYALIN.

TESTI20016650//IMMEDIATE-EARLY PROTEIN.

TESTI20022230//Chlamydomonas reinhardtii strain 1132D- flagellar

protofilament ribbon protein (RIB43a) mRNA, complete cds.

TESTI20022940//MOB2 PROTEIN (MPS1 BINDER 2).

40 TESTI20024610//TRICHOHYALIN.

TESTI20030590//TESTIS-SPECIFIC PROTEIN PBS13.

TESTI20030740//TRICHOHYALIN.

TESTI20031300//TPR Domain

TESTI20033560//F-box domain.

TESTI20035510//Proliferating-cel nucleolar antigen P120-like protein - Archaeoglobus fulgidus.

TESTI20035740//A-KINASE ANCHOR PROTEIN 150 (AKAP 150) (CAMP-DEPENDENT PROTEIN KINASE REGU-

LATORY SUBUNIT II HIGH AFFINITY BINDING PROTEIN) (P150) (FRAGMENT).

TESTI20038940//IQ calmodulin-binding motif// IQ calmodulin-binding motif// IQ calmodulin-binding motif/

TESTI20040310//Protein of unknown function DUF84

TESTI20041220//Babesia bigemina 200 kDa antigen p200 mRNA, partial cds.

TESTI20052680//Rattus norvegicus RSD-6 mRNA, complete cds.

TESTI20054080//SER/THR-RICH PROTEIN T10 IN DGCR REGION.

TESTI20065720//PROTEIN D52 (N8 PROTEIN).

TESTI20078670//RING CANAL PROTEIN (KELCH PROTEIN).

TESTI20080330//Ribosomal protein L14p/L23e

TESTI20083430//TPR Domain

THYMU10000020//Homo sapiens mRNA for Golgi protein (GPP34 gene).

THYMU10002910//Homo sapiens AP-4 adaptor complex beta4 subunit mRNA, complete cds.

THYMU20002360//Pumilio-family RNA binding domains (aka PUM-HD, Pumilio homology domain)

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TRACH10000300//Anabaena PCC7120 hetC gene, complete cds.
TRACH20007800//Homo sapiens PTH-responsive osteosarcoma B1 protein (B1) mRNA, complete cds.
TRACH20008940//PROTEIN TSG24 (MEIOTIC CHECK POINT REGULATOR).
TRACH20013950//Homo sapiens NY-REN-25 antigen mRNA, partial cds.
UMVEN10001220//Corticotropin-releasing factor family
[0249] With respect to the remaining 476 clones, there are so far no information available for estimating their func-
tions. However, there is the possibility that the functions of these clones will be revealed in future. Their Clone Names
are indicated below.
3NB6920013490, 3NB6920016370, 3NB6920017190, ADRGL10001820, ADRGL20004280, ASTRO20004800,
BGGI110002850, BNGH410000130, BNGH410000170, BNGH410000330, BNGH410001530, BNGH420004740,
BRACE10000200, BRACE10000700, BRACE10001590, BRACE20000770, BRACE20001000, BRACE20001410,
BRACE20003320, BRACE20004210,
BRACE20005050, BRACE20005450, BRACE20009880, BRACE20010700, BRACE20011880, BRACE20013740,
BRACE20015430, BRACE20016920, BRACE20018650, BRACE20018980, BRACE20020500, BRACE20021510,
BRACE20021760, BRACE20024950, BRACE20025900, BRACE20027520, BRACE20028600, BRACE20028610,
BRACE20032850, BRACE20033190,
BRACE20033980, BRACE20034310, BRACE20035160, BRACE20035270, BRACE20035390, BRACE20035940,
BRACE20071530, BRACE20072010, BRACE20072320, BRACE20075270, BRACE20075630, BRACE20076210,
BRACE20076460, BRACE20077080, BRACE20077270, BRACE20077670, BRACE20077680, BRACE20079020,
BRACE20081140, BRACE20084800,
BRACE20084880, BRACE20086530, BRACE20087080, BRACE20087540, BRACE20088570, BRACE20089990,
BRACE20090140, BRACE20092740, BRACE20092750, BRACE20093110, BRACE20094370, BRACE20095170,
BRAWH10000070, BRAWH10001740, BRAWH20000930, BRAWH20002480, BRAWH20005540, BRAWH20008660,
BRAWH20008920, BRAWH20011030,
BRAWH20047310, BRAWH20064930, BRAWH20069600, BRAWH20074060, BRAWH20089030, BRAWH20092270,
BRAWH20094850, CTONG20003030, CTONG20007710, CTONG20008270, CTONG20020730, CTONG20021430,
CTONG20024530, CTONG20029650, DFNES20002920, FCBBF10006860, FCBBF10006910, FCBBF10007320,
FCBBF10007600, FCBBF20001050,
FCBBF20001950, FCBBF20005760, FCBBF20006770, FCBBF20008080, FCBBF20012990, FCBBF20014800,
FCBBF20017180, FCBBF20017200, FEBRA20003300, FEBRA20003910, FEBRA20006800, FEBRA20007400,
FEBRA20007710, FEBRA20008740, FEBRA20009010, FEBRA20009590, FEBRA20011970, FEBRA20015900,
FEBRA20015910, FEBRA20021940,
FEBRA20027270, FEBRA20027830, FEBRA20028820, FEBRA20028970, FEBRA20029080, FEBRA20033080,
FEBRA20042240, FEBRA20042370, FEBRA20042930, FEBRA20044120, FEBRA20044430, FEBRA20053770,
FEBRA20054270, FEBRA20057520, FEBRA20059980, FEBRA20061500, FEBRA20063540, FEBRA20066270,
FEBRA20074140, FEBRA20074580,
FEBRA20076220, HCASM10001150, HCASM20005340, HLUNG10000300, HLUNG20003140, HLUNG20004120,
HLUNG20004800, HLUNG20005010, HSYRA10001480, HSYRA20002480, HSYRA20002530, HSYRA20007600,
HSYRA20011530, IMR3210000740, IMR3210000750, IMR3210001650, IMR3220006090, IMR3220009350,
IMR3220009530, IMR3220011850,
IMR3220016000, IMR3220017240, KIDNE10000280, KIDNE10000500, KIDNE10001450, KIDNE20001920,
KIDNE20002440, KIDNE20002450, KIDNE20002660, KIDNE20033350, KIDNE20033770, KIDNE20037520,
KIDNE20040340, KIDNE20040540, KIDNE20042940, KIDNE20045200, KIDNE20045340, KIDNE20045790,
KIDNE20048640, KIDNE20048790,
KIDNE20059370, KIDNE20070050, KIDNE20070770, KIDNE20073560, LIVER10000990, LIVER10002780,
LIVER10003030, LIVER20004460, LIVER20005150, MAMGL10000350, MESAN20002670, MESAN20003370,
NB9N410001210, NB9N410001460, NHNPC10001010, NT2NE10000040, NT2NE10001200, NT2NE20000380,
NT2NE20000560, NT2NE20000640,
NT2NE20006360, NT2NE20007060, NT2NE20007870, NT2NE20008020, NT2NE20009800, NT2NE20011560,
NT2NE20013240, NT2NE20013640, NT2NE20014030, NT2NE20014280, NT2NE20015300, NT2NE20016230,
NT2NE20016480, NT2NE20044900, NT2RI10000160, NT2RI10001640, NT2RI20000640, NT2RI20002700,
NT2RI20002940, NT2RI20006710,
NT2RI20007380, NT2RI20008650, NT2RI20012350, NT2RI20012440, NT2RI20014100, NT2RI20017260,
NT2RI20026540, NT2RI20028020, NT2RI20028520, NT2RI20030190, NT2RI20030670, NT2RI20033040,
NT2RI20033380, NT2RI20035560, NT2RI20040590, NT2RI20043980, NT2RI20047830, NT2RI20048400,
NT2RI20049160, NT2RI20049840,
NT2RI20056280, NT2RI20061270, NT2RI20063450, NT2RI20064870, NT2RI20065530, NT2RI20066670.
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NT2RI20067880, NT2RI20071160, NT2RI20072140, NT2RI20073860,
                                                             NT2RI20075070, NT2RI20075720,
NT2RI20075890. NT2RI20077290. NT2RI20077510. NT2RI20085260. NT2RI20086560. NT2RI20088010.
NT2RI20090830, NT2RP60000170,
NT2RP60000590, NT2RP70000410, NT2RP70003910, NT2RP70005790, NT2RP70013350, NT2RP70024490,
NT2RP70025540, NT2RP70028410, NT2RP70030500, NT2RP70030910, NT2RP70047510, NT2RP70047660,
NT2RP70049750, NT2RP70052190, NT2RP70054680, NT2RP70054930, NT2RP70063740, NT2RP70066210,
NT2RP70067010, NT2RP70069800,
NT2RP70071140, NT2RP70073590, NT2RP70079300, NT2RP70081420, NT2RP70086230, NT2RP70092150,
NT2RP70092590, NT2RP70093630, NT2RP70093970, NT2RP70094660, NT2RP70095020, NTONG10000330,
NTONG20005830, NTONG20009850, NTONG20011370, NTONG20014280, OCBBF10000670, OCBBF10000860,
OCBBF10001040, OCBBF20000130,
OCBBF20001260, OCBBF20002870, OCBBF20009040, OCBBF20017060, PANCR10001850, PEBLM10000290,
PEBLM10001800, PEBLM20000300, PEBLM20001260, PEBLM20001470, PLACE50001530, PLACE60000440,
PLACE60000700, PLACE60000800, PLACE60001370, PLACE60002630, PLACE60003710, PLACE60004240,
PLACE60005230, PLACE60005500,
PLACE60009530, PLACE60012940, PLACE60019230, PLACE60019250, PLACE60026920, PLACE60029490,
PLACE60030940, PLACE60031090, PLACE60033720, PLACE60037400, PLACE60040050, PLACE60043120,
PLACE60043360, PLACE60044910, PLACE60046870, PLACE60049310, PROST10001520, PROST10002460,
PROST10005640, PROST20002060,
PROST20002670, PROST20002740, PROST20004630, PROST20017390, PROST20017960, PROST20019980,
PROST20021620, PROST20025910, PROST20028420, PROST20031020, PROST20032100, PROST20033030,
PROST20037320, PROST20044810, PROST20056040, PROST20061960, PUAEN10000810, SKMUS10001240,
SKMUS20003430, SKMUS20004670,
SKMUS20004680, SKMUS20008470, SKMUS20009450, SKMUS20015010, SKMUS20016080, SKMUS20016310,
SKMUS20016710, SKNMC10000070, SKNMC10000100, SKNMC10001100, SKNMC10001590, SKNMC10001680,
SKNMC10002640, SKNMC20003050, SKNMC20005930, SKNMC20006120, SKNMC20015550, SKNSH10000860,
SKNSH10003080, SKNSH20001510,
SKNSH20001630, SMINT10000390, SMINT10000540, SMINT20000400, SMINT20002390, SMINT20005580,
SPLEN10000490, SPLEN20000470, SPLEN20002420, SPLEN20004430, SPLEN20005410, STOMA10000470,
STOMA10001330, STOMA20001880, STOMA20004780, SYNOV10001640, SYNOV20011440, SYNOV20014570,
TESTI10000230, TESTI10001250,
TESTI10001630, TESTI10001790, TESTI20000180, TESTI20001790, TESTI20003720, TESTI20004620,
TESTI20005200, TESTI20006710, TESTI20008190,
                                             TESTI20008300,
                                                             TESTI20009510,
                                                                            TESTI20010080,
TESTI20010820, TESTI20013060, TESTI20015930,
                                             TESTI20017580,
                                                             TESTI20017660, TESTI20017920,
TESTI20018260, TESTI20018290,
TESTI20018980, TESTI20019500, TESTI20019680, TESTI20019910, TESTI20020480, TESTI20020900,
TESTI20022450, TESTI20022640, TESTI20023610,
                                             TESTI20023690,
                                                             TESTI20024150,
                                                                            TESTI20025440,
TESTI20028060, TESTI20028400, TESTI20029650, TESTI20032550,
                                                             TESTI20032800, TESTI20032990,
TESTI20033760, TESTI20034180,
TESTI20035410. TESTI20035800. TESTI20037270. TESTI20041110.
                                                             TESTI20042430,
                                                                            TESTI20049290.
TESTI20051550. TESTI20054920.
                              TESTI20062380.
                                             TESTI20062550.
                                                             TESTI20064250.
                                                                            TESTI20069790.
TESTI20073580, TESTI20074020, TESTI20076130, TESTI20077500, TESTI20081390, TESTI20082340,
TESTI20082400, TESTI20084400,
THYMU10000320, THYMU10001050, THYMU10003660, THYMU10004730, THYMU10005270, THYMU20001400,
TRACH10000180, TRACH10000570, TRACH10001060, TRACH20002350, TRACH20004610, TRACH20011920,
TRACH20014000, UTERU20003380, UTERU20005410, UTERU20005690
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# **EXAMPLE 7**

# Expression frequency analysis in silico

[0250] The cDNA libraries derived from various tissues and cells as indicated in Example 1 were prepared, and cDNA clones were selected from each library at random. The 5'-end sequences were determined and the database was constructed based on the data. The database was constructed based on the nucleotide sequences of 770,546 clones, and thus the population of the database is large enough for the analysis.

[0251] Then, clones having a homologous sequence are categorized into a single cluster (clustering) by searching the nucleotide sequences of respective clones in this database with the program of nucleotide sequence homology search; the number of clones belonging to each cluster was determined and normalized for every library; thus, the

ratio of a certain gene in each cDNA library was determined. This analysis gave the information of the expression frequency of genes in tissues and cells which were sources of the cDNA libraries.

[0252] Then, in order to analyze the expression of a gene containing the nucleotide sequence of the cDNA of the present invention in tissues and cells, the library derived from a tissue or a cell used in the large-scale cDNA analysis was subjected to the comparison of the expression levels between tissues or cells. Namely, the expression frequency was analyzed by comparing the previously normalized values between tissues and/or cells for which the nucleotide sequences of 600 or more cDNA clones had been analyzed. By this analysis, some of the genes were revealed to be involved in the pathology and functions indicated below. Each value in Tables 3 to 39 shown below represents a relative expression frequency; the higher the value, the higher the expression level.

# Osteoporosis-related genes

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[0253] Osteoporosis is a pathology in which bones are easily broken owing to overall decrease in components of bone. The onset involves the balance between the functions of osteoblast producing bone and osteoclast absorbing bone, namely bone metabolism. Thus, the genes involved in the increase of osteoclasts differentiating from precursor cells of monocyte/macrophage line (Molecular Medicine 38. 642-648. (2001)) are genes involved in bone metabolism associated with osteoporosis.

[0254] A nucleotide sequence information-based analysis was carried out to identify the genes whose expression frequencies are higher or lower in CD34+ cell (cell expressing a glycoprotein CD34) treated with the osteoclast differentiation factor (Molecular Medicine 3.8. 642-648. (2001)) than in the untreated CD34+ cell, which is the precursor cell of monocyte/macrophage line. The result of comparative analysis for the frequency between the two cDNA libraries prepared from the RNA of CD34+ cells (CD34C) and from the RNA of CD34+ cells treated with the osteoclast differentiation factor (D30ST, D60ST or D90ST) showed that the genes whose expression levels were different between the two were the following clones (Table 3).

5 KIDNE20062480, NT2RI20016570, PLACE60020840, 3NB6920002810, BRACE20035270, BRAWH20000340, FEBRA20062700, HSYRA20011030, NT2RP70030910, OCBBF20011240, PLACE60043120, SYNOV20011440, HCASM10001150, IMR3220016000, NT2RI20082210, D3OST20001840, FEBRA20012940, FEBRA20021910, IMR3220002230, IMR3220012180,

NT2RI20000640, NT2RI20010910, NT2RI20058110, NT2RP60000350, NT2RP70011660, PEBLM20003950, PLACE60049310, PROST20062600, TESTI20007840, TESTI20040310, TESTI20080200, THYMU10003590, TRACH10000630, TRACH20007800, CD34C20000510, HSYRA20016210, KIDNE20004030, KIDNE20073280, NT2RP70055020, PLACE60043960, SKMUS10000220

[0255] These genes are involved in osteoporosis.

# 35 Genes involved in neural cell differentiation

NT2RP70029820, NT2RP70049150,

[0256] Genes involved in neural cell differentiation are useful for treating neurological diseases. Genes with varying expression levels in response to induction of cellular differentiation in neural cells are thought to be involved in neurological diseases.

[0257] A survey was performed for genes whose expression levels are varied in response to induction of differentiation (stimulation by retinoic acid (RA) or growth inhibitor treatment after RA stimulation) in cultured cells of a neural strain, NT2. The result of comparative analysis of cDNA libraries derived from undifferentiated NT2 cells (NT2RM) and the cells subjected to the differentiation treatment (NT2RP, NT2RI or NT2NE) showed that the genes whose expression levels were different between the two were the following clones (Table 4).

5 SKNMC20000970, 3NB6920009120, BRAWH20006970, KIDNE20062480, NHNPC20002060, NT2NE20053710, NT2RI20000640, NT2RI20004210, NT2RI20006710, NT2RI20009740, NT2RI20013420, NT2RI20013850, NT2RI20014100, NT2RI20025410, NT2RI20033040, NT2RI20035560, NT2RI20036950, NT2RI20051500, NT2RI20053350, NT2RI20057230,

NT2RI20071330, NT2RI20075720, NT2RI20083960, NT2RI20087910, NT2RI20090650, NT2RI20094060, NT2RP60000350, NT2RP70000760, NT2RP70036800, NT2RP70071770, NT2RP70074220, TESTI20007840, TESTI20080200, 3NB6920002810, 3NB6920005450, HSYRA20015740, HSYRA20016210, IMR3220016000, KIDNE20060140, NT2RI20014490,

NT2RI20015950, NT2RI20022520, NT2RI20025170, NT2RI20025540, NT2RI20030510, NT2RI20040590, NT2RI20046060, NT2RI20053680, NT2RI20058510, NT2RI20066820, NT2RI20067030, NT2RI20074980, NT2RI20075890, NT2RI20078840, NT2RI20084810, NT2RI20089420, NT2RP7002380, NT2RP70023790,

NT2RP70055020, NT2RP70065270, NT2RP70069860, NT2RP70075370, NT2RP70079750, NT2RP70092590, OCBBF20000130, PLACE60043970, TESTI20053960, BNGH420004740, HSYRA20002480, NT2NE10000730,

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NT2NE20000560, NT2NE20003270, NT2NE20008090, NT2NE20014030, NT2RP60000720, NT2RP60001090,
NT2RP70004770, NT2RP70010800,
NT2RP70011660, NT2RP70028750, NT2RP70029060, NT2RP70030550, NT2RP70032030, NT2RP70036320,
NT2RP70064900, NT2RP70093220, NT2RP70093730, SYNOV20013740, TESTI20021490, TRACH20004720,
TRACH20007800. 3NB6920003300, BRACE10000200, BRACE20018550, FEBRA20008740, FEBRA20074580,
FEBRA20076220, KIDNE20073520.
MAMGL10000320, NT2NE20002140, NT2NE20006360, NT2NE20007870, NT2NE20009800, NT2NE20035690,
NT2RI20002940, NT2RI20014500, NT2RI20016210, NT2RI20029260, NT2RI20037510, NT2RI20055640,
NT2RI20064120, NT2RI20074390, NT2RI20077230, NT2RI20090660, PLACE60040050, TRACH20012890,
3NB6910001730, BRACE10001150,
BRACE20011170, BRACE20020910, BRACE20035270, BRAWH20005220, FEBRA20003970, FEBRA20012450,
HLUNG20003140, IMR3220009350, IMR3220013170, IMR3220013320, IMR3220014350, NT2NE10000040,
NT2NE10000140, NT2NE10000180, NT2NE10000230, NT2NE10000630, NT2NE10000830, NT2NE10001200,
NT2NE10001630, NT2NE10001850,
NT2NE20000380, NT2NE20000640, NT2NE20001740, NT2NE20002590, NT2NE20002990, NT2NE20003690,
NT2NE20003840, NT2NE20003920, NT2NE20004550, NT2NE20004700, NT2NE20005170, NT2NE20005360,
NT2NE20005500, NT2NE20005860, NT2NE20006580, NT2NE20007060, NT2NE20007630, NT2NE20008020,
NT2NE20011560, NT2NE20012470,
NT2NE20013240, NT2NE20013370, NT2NE20013640, NT2NE20013720, NT2NE20014280, NT2NE20014350,
NT2NE20015300, NT2NE20016230, NT2NE20016260, NT2NE20016340, NT2NE20016480, NT2NE20016660,
NT2NE20016970, NT2NE20034080, NT2NE20044900, NT2NE20047160, NT2NE20054410, NT2NE20055170,
NT2NE20057200, OCBBF20009040,
OCBBF20015860, PLACE60020840, PROST10005260, SKMUS20008630, SMINT20003960, STOMA20001210,
SYNOV20011440, TESTI10000230, TESTI20009700, TESTI20040310, THYMU10003290, TRACH20013950,
BGGI120010970, BNGH410001980, BRACE10001660, BRACE20014770, BRACE20034490, BRACE20071740,
BRAWH20009440, BRAWH20036930.
CTONG20020730, CTONG20028030, FCBBF10006750, FCBBF20012110, FCBBF20015380, FEBRA20007570,
FEBRA20043250, FEBRA20068730, HCASM10001150, HCASM20002140, HHDPC20000950, HHDPC20004620,
HSYRA10001370, HSYRA10001780, HSYRA20001350, HSYRA20006050, IMR3210001580, IMR3220002230,
IMR3220003020, KIDNE20004030,
KIDNE20060300, KIDNE20073280, MESAN20005010, NT2RI10000160, NT2RI10000270, NT2RI10000480,
NT2RI10001640, NT2RI20002700, NT2RI20002820, NT2RI20003410, NT2RI20004120, NT2RI20005970,
NT2RI20006690, NT2RI20006850, NT2RI20007380, NT2RI20008650, NT2RI20010100, NT2RI20010830,
NT2RI20010910, NT2RI20012350,
NT2RI20012440, NT2RI20014090, NT2RI20015190, NT2RI20015400, NT2RI20016570, NT2RI20017260,
NT2RI20018460, NT2RI20018660, NT2RI20020220, NT2RI20020410, NT2RI20021520, NT2RI20022430,
NT2RI20022700, NT2RI20025300, NT2RI20025850, NT2RI20026540, NT2RI20028020, NT2RI20028520,
NT2RI20029580, NT2RI20029700,
NT2RI20030110, NT2RI20030190, NT2RI20030670, NT2RI20031540, NT2RI20032050, NT2RI20032220,
NT2RI20033010, NT2RI20033380, NT2RI20033440, NT2RI20033830, NT2RI20036780, NT2RI20041900,
NT2RI20042840, NT2RI20043040, NT2RI20043980, NT2RI20044420, NT2RI20047830, NT2RI20048400.
NT2RI20049160, NT2RI20049840.
NT2RI20049850, NT2RI20050610, NT2RI20050870, NT2RI20056280, NT2RI20056470, NT2RI20058110,
NT2RI20060710, NT2RI20060720, NT2RI20061270, NT2RI20061830, NT2RI20062100, NT2RI20063450,
NT2RI20064870, NT2RI20065060, NT2RI20065530, NT2RI20066670, NT2RI20066790, NT2RI20067350,
NT2RI20067880, NT2RI20068250.
NT2RI20068550, NT2RI20070480, NT2RI20070840, NT2RI20070960, NT2RI20071160, NT2RI20071480,
NT2RI20072140, NT2RI20072540, NT2RI20073030, NT2RI20073840, NT2RI20073860, NT2RI20074690,
NT2RI20075070, NT2RI20077290, NT2RI20077510, NT2RI20077540, NT2RI20078270, NT2RI20078790,
NT2RI20078910, NT2RI20080500,
NT2RI20081880, NT2RI20082210, NT2RI20083360, NT2RI20085260, NT2RI20085980, NT2RI20086560,
NT2RI20087140, NT2RI20087490, NT2RI20088010, NT2RI20088120, NT2RI20090830, NT2RI20091440,
NT2RI20092150, NT2RI20092890, NTONG10001820, OCBBF20002770, OCBBF20011240, PEBLM10001440,
PLACE50001130, PLACE60014430,
PROST20029600, PUAEN10000570, SALGL10001570, SKMUS10000220, SKMUS20004670, STOMA20002890,
SYNOV10001280, TESTI20012690, TESTI20023690, TESTI20028660, TESTI20068720, THYMU10000020,
THYMU10000830, TRACH20002370, 3NB6910001290, BRACE10000700, BRACE20003320, BRACE20015080,
BRACE20079020, BRACE20083800,
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BRACE20092740, FEBRA20008810, FEBRA20017150, FEBRA20067930, HHDPC20000550, HSYRA20008280,
HSYRA20014760, KIDNE10001450, KIDNE20000850, KIDNE20002660, KIDNE20003300, KIDNE20033050,
KIDNE20045340, NT2RP60000080, NT2RP60000170, NT2RP60000320, NT2RP60000390, NT2RP60000590,
NT2RP60000860, NT2RP60001000,
NT2RP60001230, NT2RP60001270, NT2RP70000410, NT2RP70000690, NT2RP70002590, NT2RP70002710,
NT2RP70003640, NT2RP70003910, NT2RP70004250, NT2RP70005790, NT2RP70006240, NT2RP70008120.
NT2RP70009060, NT2RP70012310, NT2RP70013060, NT2RP70013350, NT2RP70015910, NT2RP70018560,
NT2RP70021510, NT2RP70022430,
NT2RP70023760, NT2RP70024490, NT2RP70024500, NT2RP70025540, NT2RP70026190, NT2RP70028290,
NT2RP70028410, NT2RP70030500, NT2RP70030910, NT2RP70033040, NT2RP70036290, NT2RP70036470,
NT2RP70039600, NT2RP70040800, NT2RP70042040, NT2RP70042330, NT2RP70042600, NT2RP70043730,
NT2RP70043960, NT2RP70045410,
NT2RP70046560, NT2RP70046870, NT2RP70047510, NT2RP70047660, NT2RP70047900, NT2RP70049250,
NT2RP70049750, NT2RP70052050, NT2RP70052190, NT2RP70054680, NT2RP70054930, NT2RP70055130,
NT2RP70055200, NT2RP70061620, NT2RP70061880, NT2RP70062960, NT2RP70063040, NT2RP70063740,
NT2RP70064080, NT2RP70066210,
NT2RP70067010, NT2RP70069800, NT2RP70071140, NT2RP70071540, NT2RP70072210, NT2RP70072520,
NT2RP70073590, NT2RP70073810, NT2RP70074060, NT2RP70075040, NT2RP70076100, NT2RP70076170,
NT2RP70076430, NT2RP70079250, NT2RP70079300, NT2RP70081330, NT2RP70081370, NT2RP70081420,
NT2RP70081440, NT2RP70081670,
NT2RP70083150, NT2RP70084060, NT2RP70084410, NT2RP70084870, NT2RP70085500, NT2RP70085570,
NT2RP70086230, NT2RP70087200, NT2RP70088550, NT2RP70090120, NT2RP70090190, NT2RP70091490,
NT2RP70091680, NT2RP70092150, NT2RP70092360, NT2RP70093630, NT2RP70093700, NT2RP70093940,
NT2RP70093970, NT2RP70094290,
NT2RP70094660, NT2RP70094810, NT2RP70094980, NT2RP70095020, NT2RP70095070, NTONG10000980,
NTONG10002140, NTONG20002650, NTONG20016120, PEBLM20003950, PROST10005640, PROST20003250,
SKNMC20000650, SKNSH10000860, SKNSH20003470, TESTI10000510, TESTI10000960, TESTI20015110,
TESTI20074640, TRACH20004610
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Cancer-related genes

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[0258] These genes are neurological disease-related genes.

[0259] It has been assumed that, distinct from normal tissues, cancer tissues express a distinct set of genes, and thus the expression can contribute to the carcinogenesis in tissues and cells. Thus, the genes whose expression patterns in cancer tissues are different from those in normal tissues are cancer-related genes. Search was carried out

for the genes whose expression levels in cancer tissues were different from those in normal tissues.

[0260] The result of comparative analysis of cDNA libraries derived from breast tumor (TBAES) and normal breast (BEAST) showed that the genes whose expression levels were different between the two were the following clones (Table 5).

40 3NB6910001730, FCBBF10007600, KIDNE20033050, KIDNE20060300, NT2RI20065530, NT2RP60000720, NT2RP70075370, TRACH20004200, LIVER10000670, LIVER10005420, LIVER20000370

[0261] The result of comparative analysis of cDNA libraries derived cervical tumor (TCERX) and normal cervical duct (CERVX) showed that the genes whose expression levels were different between the two were the following clones (Table 6)

45 BRACE10001590, HHDPC20000950, HSYRA20016210, NT2RI20074980, 3NB6920014330, NT2RI20087490, NT2RP60001090, PROST10002200, SKNMC20003220, STOMA20001210

[0262] The result of comparative analysis of cDNA libraries derived from colon tumor (TCOLN) and normal colon (COLON) showed that the genes whose expression levels were different between the two were the following clones (Table 7).

BRACE20028610, BRACE20011170, BRACE20035940, IMR3220013320, NT2NE20053710

[0263] The result of comparative analysis of cDNA libraries derived from esophageal tumor (TESOP) and normal esophagus (NESOP) showed that the genes whose expression levels were different between the two were the following clones (Table 8).

KIDNE20005740, MAMGL10000320, NESOP10000870, NT2RI20056470, NTONG20008000

[0264] The result of comparative analysis of cDNA libraries derived from kidney tumor (TKIDN) and normal kidney (KIDNE) showed that the genes whose expression levels were different between the two were the following clones (Table 9).

3NB6920002810, ADRGL10000020, BNGH420004740, BRACE10000200, BRACE10000420, BRACE10000730,

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BRACE10001590, BRACE20005650, BRACE20016730, BRACE20028120, BRACE20077980, BRACE20083800, BRACE20083850, BRAWH10001740, BRAWH20036930, BRAWH20064500, BRAWH20064930, CTONG20028030, FCBBF20015380, FEBRA20005360,
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- FEBRA20007570, FEBRA20008740, FEBRA20012270, FEBRA20025250, HSYRA20002480, HSYRA20006400, HSYRA20008280, HSYRA20015740, HSYRA20016210, IMR3220009350, LIVER10001110, NT2NE20003920, NT2NE20007630, NT2NE20007870, NT2RI20025410, NT2RI20026540, NT2RI20029580, NT2RI20033380, NT2RI20033380, NT2RI20031500,
  - NT2RI20058110, NT2RI20090650, NT2RP60000720, NT2RP70013350, NT2RP70023790, NT2RP70024490, NT2RP70028750, NT2RP70029060, NT2RP70036800, NT2RP70075370, NT2RP70076100, NTONG10000980, NTONG10002460, NTONG20015500, OCBBF20002310, OCBBF20013070, PEBLM20001470, PEBLM20003950,
- PLACE60021510, PLACE60040050, PLACE60043970, PROST20051430, STOMA20001210, STOMA20002570, STOMA20002890, SYNOV20011440, TESTI10000230, TESTI20009700, TESTI20021490, TESTI20032800, TESTI20053960, TESTI20080200,
- TESTI10000230, TESTI20009700, TESTI20021490, TESTI20032800, TESTI20053960, TESTI20080200, TESTI20082400, BGGI120010970, BRACE20004210, BRACE20005250, BRACE20011170, BRACE20020910, BRACE20080970, BRAWH20000340,
  - BRAWH20006970, BRAWH20011660, FCBBF20001950, FEBRA20043250, HLUNG10000640, IMR3220007420, IMR3220014350, KIDNE1000080, KIDNE10000280, KIDNE10000500, KIDNE10001040, KIDNE10001430, KIDNE10001450, KIDNE10001520, KIDNE20000410, KIDNE20000510, KIDNE20000700, KIDNE20000850, KIDNE20001670, KIDNE20001920.
- 20 KIDNE20002440, KIDNE20002450, KIDNE20002660, KIDNE20003150, KIDNE20003300, KIDNE20003490, KIDNE20003750, KIDNE20004030, KIDNE20004220, KIDNE20004970, KIDNE20005130, KIDNE20005170, KIDNE20005190, KIDNE20005740, KIDNE20031850, KIDNE20033050, KIDNE20033350, KIDNE20033570, KIDNE20033770,
- KIDNE20037520, KIDNE20039410, KIDNE20039940, KIDNE20040340, KIDNE20040540, KIDNE20040840, KIDNE20042620, KIDNE20042940, KIDNE20042950, KIDNE20043440, KIDNE20044110, KIDNE20045200, KIDNE20045340, KIDNE20045790, KIDNE20046810, KIDNE20048280, KIDNE20048640, KIDNE20048790, KIDNE20049810, KIDNE20050420, KIDNE20052960, KIDNE20053360, KIDNE20054000, KIDNE20054770, KIDNE20056290, KIDNE20056760,
  - KIDNE20032900, KIDNE20033300, KIDNE20034000, KIDNE20034770, KIDNE20030290, KIDNE200367600, KIDNE20059080, KIDNE20059370, KIDNE20060140, KIDNE20060300, KIDNE2006D530, KIDNE20060620, KIDNE20061490, KIDNE20062990, KIDNE20063530, KIDNE20063760, KIDNE20066520, KIDNE20067600,
  - KIDNE20067750, KIDNE20068800, KIDNE20070050, KIDNE20070770, KIDNE20071860, KIDNE20073280, KIDNE20073520, KIDNE20073560, KIDNE20074220, KIDNE20075690, KIDNE20078 KIDNE20078110, LIVER10000790, MAMGL10000320, NB9N410000470, NT2NE20053710, NT2RI20006710, NT2RI20013420, NT2RI20016570, NT2RI20018460, NT2RI20025540, NT2RI20040590,
  - NT2RI20065530, NT2RI20087490, NT2RI20087910, NT2RP60000350, NT2RP60001230, NT2RP70043730, NT2RP70069860, NT2RP70074220, OCBBF20014940, PLACE60020840, PLACE60043120, PROST10003430, SKNSH20001510, SMINT10000160, SPLEN20000470, SPLEN20001340, SPLEN20003570, STOMA10000470, TESTI10000700, TESTI20027070,
- 40 TESTI20040310, TRACH10000300, TRACH20000790, TRACH20002500, TRACH20007800

SPLEN20002420, TESTI20002530, TESTI20080200, THYMU10003590, TRACH20004720

- [0265] The result of comparative analysis of cDNA libraries derived from liver tumor (TLIVE) and normal liver (LIVER) showed that the genes whose expression levels were different between the two were the following clones (Table 10). FCBBF50002610, FEBRA20076220, KIDNE20033050, NT2NE20003840, KIDNE20062480, KIDNE20068800, LIVER10000580, LIVER10000670, LIVER10000790, LIVER10000990, LIVER10001040, LIVER10001110,
- LIVER10001750, LIVER10002300, LIVER10002780, LIVER10003030, LIVER10004330, LIVER10005420, LIVER20000330, LIVER20004160, LIVER20004460, LIVER20005150, NT2NE20002140, NT2RI20030510, NT2RI20043040, NT2RI20090650, PROST10005640, PROST20032320, SALGL10001570, SMINT10000160,
- [0266] The result of comparative analysis of cDNA libraries derived from lung tumor (TLUNG) and normal lung (HLUNG) showed that the genes whose expression levels were different between the two were the following clones (Table 11).
  - NT2RI20030110, BNGH410001980, BRACE10000420, BRACE10001150, BRACE20014770, BRACE20018550, BRAWH20006970, BRAWH20014610, FEBRA20008810, FEBRA20015840, FEBRA20044120, HHDPC20001490, HLUNG10000240, HLUNG10000300, HLUNG10000370, HLUNG10000640, HLUNG10000760, HLUNG10000990, HLUNG10001050, HLUNG10001100,
  - HLUNG20000680, HLUNG20001160, HLUNG20001250, HLUNG20001420, HLUNG20001760, HLUNG20002550, HLUNG20003140, HLUNG20004120, HLUNG20004800, HLUNG20005010, HSYRA20014200, KIDNE20002660, KIDNE20033050, NT2NE20014350, NT2RI20016570, NT2RI20026540, NT2RI20051500, NT2RI20064120,

NT2RI20083960, NT2RI20085260,

THYMU10003590

- NT2RP70076100, NT2RP70009060, NT2RP70011660, NT2RP70029060, NT2RP70055020, NT2RP70074220, NT2RP70076100, NT0NG10002460, NT0NG20008000, PLACE60043120, SKMUS20016340, SKNMC20005930, SMINT20000180, SMINT20002390, SMINT20002770, SMINT20003960, STOMA10000470, STOMA20001880, SYNOV20013740, TESTI20036250, TESTI20080200, TRACH20004610
- [0267] The result of comparative analysis of cDNA libraries derived from ovary tumor (TOVER) and normal ovary (NOVER) showed the genes whose expression levels were different between the two were the following clones (Table 12).
- BRACE20011880, TESTI20030710, BRACE20076210, NT2RI20053680, SKMUS20008630, TESTI20005910, TESTI20040310
  - [0268] The result of comparative analysis of cDNA libraries derived from stomach tumor (TSTOM) and normal stomach (STOMA) showed that the genes whose expression levels were different between the two were the following clones (Table 13).
- HSYRA20011030, NT2RI20013420, NT2RP70079750, BRACE20003320, HEART20005060, HHDPC20000950, HLUNG20004120, HLUNG20005010, HSYRA20006400, KIDNE1000500, KIDNE20062480, NT2NE20053710, NT2NE20054410, NT2RI20015400, NT2RI20016570, NT2RI20064120, NT2RI20070840, NT2RI20071330, NT2RI20074980, NT2RI20077230, NT2RI20089420, NT2RP70000760, NT2RP70028750, PLACE60014430, PLACE60024190, SKNMC20000970, STOMA1000470, STOMA10000520, STOMA10001170, STOMA10001330, STOMA10001860, STOMA20000320, STOMA20000880, STOMA20001210, STOMA20001880, STOMA20002570, STOMA20002890, STOMA20003960, STOMA20004780, STOMA20004820,
  - [0269] The result of comparative analysis of cDNA libraries derived from uterine tumor (TUTER) and normal uterus (UTERU) showed that the genes whose expression levels were different between the two were the following clones (Table 14).
- NT2RI20085260, 3NB6920002810, BRACE10000420, BRACE20089990, BRACE20092120, BRAWH10001680, BRAWH20011410, BRAWH20011660, FCBBF20005910, FCBBF50002610, FEBRA20005360, FEBRA20006800, FEBRA20008800, FEBRA20044120, FEBRA20057520, HEART20005060, HHDPC20000950, HLUNG10000760, HLUNG20003140, HSYRA20014200.
- HSYRA20014760, HSYRA20015800, IMR3210002420, IMR3220002230, IMR3220009350, IMR3220014350, 30 IMR3220016000, KIDNE2000850, KIDNE20060140, KIDNE20060300, MAMGL10000350, NT2NE20035690, NT2NE20053710, NT2RI10000270, NT2RI20000640, NT2RI20002940, NT2RI20010910, NT2RI20013420, NT2RI20016570, NT2RI20033380,
  - NT2RI20036950, NT2RI20037510, NT2RI20053350, NT2RI20057230, NT2RI20058110, NT2RI20071480, NT2RI20074980, NT2RI20084810, NT2RI20087490, NT2RI20087910, NT2RP60000350, NT2RP70032030, NT2RP70043730, NTONG10000980, NTONG10002460, PLACE60014430, PLACE60026680, PLACE60043960, PLACE60044910, PLACE60047380,
  - PROST10002200, PROST10005260, PROST20025910, PROST20033380, PUAEN10000570, SALGL10001570, SKMUS10000140, SKMUS20003430, SKMUS20009540, SKNMC10002510, SKNMC20000970, SKNSH10000860, SMINT20002770, STOMA20002890, SYNOV20011440, TESTI10000230, TESTI20018290, TESTI20021490, TESTI20080200, TESTI20082400.
  - TRACH10000300, TRACH20002370, TRACH20007800, TRACH20012890, UTERU10000770, UTERU10000960, UTERU10001600, UTERU10001920, UTERU200004 UTERU20003380, UTERU20003930, UTERU20004850, UTERU20005410, UTERU20005690
- [0270] The result of comparative analysis of cDNA libraries derived from tongue cancer (CTONG) and normal tongue (NTONG) showed that the genes whose expression levels were different between the two were the following clones (Table 15).
  - 3NB6910001160, 3NB6910001290, 3NB6910001730, BNGH420004740, BRACE20008850, BRACE20020910, BRACE20074010, BRAWH20014840, BRAWH20089560, CTONG20003030, CTONG20005890, CTONG20007710, CTONG20008270, CTONG20011390, CTONG20013200, CTONG20013660, CTONG20015330, CTONG20018200, CTONG20019110, CTONG20019550, CTONG20020730, CTONG20021430, CTONG20024180, CTONG20024530, CTONG20025580, CTONG20027210, CTONG20028030, CTONG20028160, CTONG20028200, CTONG20029650, CTONG20037820, CTONG20047160, CTONG20055530, CTONG20064490, FEBRA20003770, FEBRA20004520, FEBRA20007400, FEBRA20007570, FEBRA20012940, FEBRA20021940, FEBRA20044120, HCASM10001150, HHDPC20004560, HLUNG20003140, HSYRA20002480, IMR3220009350, IMR3220012180, KIDNE20000850.
- 55 KIDNE20002660, KIDNE20004220, KIDNE20005740, KIDNE20056760, KIDNE20060140, KIDNE20062480, MESAN20000920, MESAN20003370, NHNPC20002060, NT2NE10001850, NT2NE20000560, NT2NE20002140, NT2NE20003270, NT2NE20003840, NT2NE20014350, NT2NE20053710, NT2RI20006690, NT2RI20006710, NT2RI20016570, NT2RI20018660, NT2RI20025300, NT2RI20025410, NT2RI20030190, NT2RI20030510.

- NT2RI20036950, NT2RI20046060, NT2RI20053350, NT2RI20067350, NT2RI20075720, NT2RI20078790, NT2RI20083960, NT2RI20087140, NT2RI20094060, NT2RP60000350, NT2RP60001230, NT2RP70000760, NT2RP70004770, NT2RP70009060, NT2RP70011660, NT2RP70023760, NT2RP70023790, NT2RP70024500, NT2RP70026190, NT2RP70029820, NT2RP70036470, NT2RP70043730, NT2RP70061880, NT2RP70071770, NT2RP70076100, NT2RP70079750, NT2RP70084870, NT2RP70093730, OCBBF20013070, PEBLM20003950, PLACE60037450, PLACE60043120, PROST10003430, PROST10005260, PROST20032320, PROST20033020, PROST20056040, SKNMC10002510, SKNMC20000650, SKNMC20010570, SKNSH20003470, SMINT20000180, SYNOV20013740, TESTI1000230, TESTI10001680, TESTI2007840, TESTI20021490, TESTI20022230, TESTI20023690, TESTI20030050, TESTI20042950, TESTI20068720, TESTI20080200, TRACH20012890, BRACE20006980, BRACE200092740, BRAWH20006970, FCBBF10007600, FEBRA20062700, IMR3220016000, KIDNE20073280, MAMGL10000350, NT2NE20035690, NT2RI20056470, NT2RI20058110, NT2RI20084810, NT2RI20085260, NT2RP70015910, NT2RP70036290, NT2RP70036320, NT2RP70074220, NT2RP70075370,
- NTONG1000330, NTONG1000520, NTONG10001230, NTONG10001300, NTONG10001820, NTONG10002140, NTONG10002460, NTONG10002570, NTONG10002640, NTONG20002650, NTONG20003340, NTONG20003630, NTONG20004920, NTONG20005830, NTONG20008000, NTONG20008780, NTONG20009660, NTONG20009850, NTONG20011370, NTONG20012220, NTONG20014280, NTONG20015500, NTONG20016120, OCBBF20011240, OCBBF20015860, PROST10002200, SKMUS20016340, SKNMC20000970, STOMA20004820, SYNOV10001280, SYNOV20011440, THYMU10000830, TRACH20000790, TRACH20009260

[0271] These genes are involved in cancers.

- [0272] Further, there is a method to search for genes involved in development and differentiation: the expression frequency analysis in which the expression levels of genes are compared between developing or differentiating tissues and/or cells and adult tissues and/or cells. The genes involved in tissue development and/or differentiation are genes participating in tissue construction and expression of function, and thus are useful genes, which are available for regenerative medicine aiming at convenient regeneration of injured tissues.
- 25 [0273] Search was carried out for the genes whose expression frequencies were different between developing and/ or differentiating tissues and/or cells, and adult tissues and/or cells, by using the information of gene expression frequency based on the database of the nucleotide sequences of 770,546 clones shown above.
  - [0274] The result of comparative analysis of cDNA libraries derived from fetal brain (FCBBF, FEBRA or OCBBF) and adult brain (BRACE, BRALZ, BRAMY, BRAWH, BRCAN, BRCOC, BRHIP, BRSSN, BRSTN or BRTHA) showed that the genes whose expression levels were different between the two were the following clones (Tables 16 to 36).
  - BRACE20028960, BRACE20074010, BRACE20077080, BRACE20077980, BRACE20083800, BRACE20088570, BRAWH10000010, BRAWH10000020, BRAWH10000070, BRAWH10000370, BRAWH10000940, BRAWH10001300, BRAWH10001640, BRAWH10001680, BRAWH10001740, BRAWH10001800, BRAWH20000340, BRAWH20000340, BRAWH20000480, BRAWH20000930,
- BRAWH20001770, BRAWH20002480, BRAWH20003230, BRAWH20004430, BRAWH20004760, BRAWH20005030, BRAWH20005540, BRAWH20006330, BRAWH20006510, BRAWH20006970, BRAWH20008660, BRAWH20008920, BRAWH20009010, BRAWH20009440, BRAWH20009840, BRAWH20011030, BRAWH20011290, BRAWH20011660, BRAWH20012030, BRAWH20014180,
- BRAWH20014380, BRAWH20014610, BRAWH20015030, BRAWH20036890, BRAWH20038320, BRAWH20047310,

  BRAWH20059980, BRAWH20060440, BRAWH20064930, BRAWH20066220, BRAWH20069600, BRAWH20069890,

  BRAWH20074060, BRAWH20076050, BRAWH20089560, BRAWH20092270, BRAWH20092610, BRAWH20093600,

  BRAWH20094850, IMR3220013170.
  - KIDNE20000850, KIDNE20004220, KIDNE20031850, KIDNE20050420, MAMGL10000350, NT2NE20001740, NT2RI20042840, NT2RI20086560, NT2RP70002590, NT2RP70065270, NT2RP70074220, NTONG10001820, PEBLM20001470, PLACE60032040, SKMUS10000140, SMINT20005450, TESTI20004350, TESTI20008830, TRACH20007800, TRACH20016070.
  - UMVEN20001330, 3NB6910001730, 3NB6920002810, ADRGL20000740, BNGH410001370, BNGH410001980, BRACE10000200, BRACE10000730, BRACE10000930, BRACE20000770, BRACE20001000, BRACE20001410, BRACE20002800, BRACE20003320, BRACE20005050, BRACE20005250, BRACE20005450, BRACE20005650,
- BRACE20005650, BRACE20005770, BRACE20006980, BRACE20007180, BRACE20008850, BRACE20009880, BRACE20010650, BRACE20010700, BRACE20011170, BRACE20011430, BRACE20011430, BRACE20011880, BRACE20013400, BRACE20013520, BRACE20013740, BRACE20013750, BRACE20014230, BRACE20014530, BRACE20014550, BRACE20014770, BRACE20014920, BRACE20015080,
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BRACE20072010, BRACE20072320,
BRACE20072810. BRACE20074470. BRACE20075020. BRACE20075270. BRACE20075380. BRACE20075630.
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BRACE20077670, BRACE20077840, BRACE20078680, BRACE20079020, BRACE20079530, BRACE20080970,
BRACE20081140, BRACE20083850,
BRACE20084430, BRACE20084880, BRACE20086530, BRACE20086550, BRACE20087080, BRACE20087540,
BRACE20089600, BRACE20089990, BRACE20090140, BRACE20091880, BRACE20092120, BRACE20092750,
BRACE20093070, BRACE20093110, BRACE20094370, CTONG20008270, CTONG20013200, CTONG20020730,
CTONG20064490, HHDPC20000950,
HHDPC20001150, HHDPC20004560, HSYRA10001780, HSYRA20008280, HSYRA20011530, IMR3210002660,
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NT2RI20070960, NT2RI20071480,
NT2RI20072540, NT2RI20074980, NT2RI20085260, NT2RI20088120, NT2RI20090660, NT2RI20090830,
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FCBBF20005910, FCBBF20006770, FCBBF20007330, FCBBF20008080, FCBBF20008150, FCBBF20009400,
FCBBF20009510, FCBBF20012110, FCBBF20012990, FCBBF20014800, FCBBF20016720, FCBBF20017180,
FCBBF20017200, FCBBF40002820,
HCASM10001150, HHDPC20001490, HLUNG10000640, HLUNG20003140, HLUNG20005010, HSYRA20001350,
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NT2RI20010910, NT2RI20016210, NT2RI20016570, NT2RI20033040, NT2RI20033440, NT2RI20058110,
NT2RI20065060, NT2RI20087490, NT2RP60000720, NT2RP70002710, NT2RP70012310, NT2RP70036800,
NT2RP70055020, NT2RP70055130, NT2RP70061880, NT2RP70084410, PLACE60037450, PLACE60049310,
PROST10005260, PROST20018230,
PROST20051430, SKMUS20000740, SKMUS20011470, SKNMC20003560, SKNSH20001630, SPLEN10000490,
STOMA20002890, SYNOV20013740, TESTI20011410, TESTI20033760, TESTI20074640, TRACH10000300,
TRACH20013950, 3NB6920003300, 3NB6920009120, ADRGL10000180, BRACE10001150, BRACE10001590,
BRACE10001690, BRACE20077680,
BRACE20092740, BRACE20093610, BRACE20095170, BRAWH20011410, BRAWH20036930, BRAWH20064500,
BRAWH20087060, CTONG20019110, FEBRA20000350, FEBRA20000530, FEBRA20001050, FEBRA20001290,
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FEBRA20011460, FEBRA20012270,
FEBRA20012940, FEBRA20013510, FEBRA20014870, FEBRA20015900, FEBRA20015910, FEBRA20017060,
FEBRA20017900, FEBRA20019890, FEBRA20020860, FEBRA20024290, FEBRA20024420, FEBRA20027270,
FEBRA20027830, FEBRA20028820, FEBRA20028970, FEBRA20029080, FEBRA20030540, FEBRA20031550,
FEBRA20033080, FEBRA20034290,
FEBRA20037070, FEBRA20041100, FEBRA20041910, FEBRA20042240, FEBRA20042370, FEBRA20042930,
FEBRA20043290, FEBRA20044430, FEBRA20044900, FEBRA20045920, FEBRA20048180, FEBRA20050140,
FEBRA20050790, FEBRA20052160, FEBRA20053770, FEBRA20053800, FEBRA20054270, FEBRA20057260,
FEBRA20057520, FEBRA20059980,
FEBRA20060920, FEBRA20061500, FEBRA20062700, FEBRA20063150, FEBRA20063540, FEBRA20064760,
FEBRA20066670, FEBRA20067360, FEBRA20067930, FEBRA20068730, FEBRA20069420, FEBRA20070170,
FEBRA20072000, FEBRA20072800, FEBRA20074140, FEBRA20075510, FEBRA20075660, HSYRA20006400,
HSYRA20015800, IMR3220002230,
KIDNE20005740, KIDNE20053360, NT2NE20002140, NT2NE20003270, NT2NE20003840, NT2NE20007870,
NT2NE20047160, NT2NE20053710, NT2RI20025410, NT2RI20051500, NT2RI20055640, NT2RI20058510.
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KIDNE20045340, NT2NE20002590,
NT2NE20014030, NT2RI20020220, NT2RI20026540, NT2RI20060710, NT2RI20083960, NT2RI20084810,
NT2RP70011660, NT2RP70021510, NT2RP70024490, NT2RP70026190, NT2RP70039600, NT2RP70049250,
NT2RP70071770, NT2RP70093940, NTONG10002640, NTONG20002650, OCBBF10000420, OCBBF10000670,
OCBBF10000860, OCBBF10000910,
OCBBF10001040, OCBBF10001180, OCBBF10001190, OCBBF10001220, OCBBF20002770, OCBBF20002870,
OCBBF20007190, OCBBF20008240, OCBBF20009980, OCBBF20010750, OCBBF20011010, OCBBF20011400,
OCBBF20011760, OCBBF20014080, OCBBF20014940, OCBBF20015270, OCBBF20015280, OCBBF20015860,
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OCBBF20001260, TESTI10000230, 3NB6920017190, ADRGL10000020, BRACE10001660, BRAWH10001620,
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NT2NE20007630, NT2RI20004120, NT2RI20013420, NT2RI20033380, NT2RI20036950, NT2RI20053350,
NT2RI20053680, NT2RI20078840,
NT2RI20083360, NT2RI20090650, NT2RP60001090, NT2RP70004770, NT2RP70023790, NT2RP70055200,
NT2RP70085570, NTONG10000980, NTONG20016120, OCBBF20011240, OCBBF20012100, OCBBF20013070,
OCBBF20014020, PEBLM20003950, PLACE50001130, PLACE60021510, PUAEN10000570, SKNMC20000970,
TESTI20040310, TRACH20004610,
3NB6920005450, BRACE10000420, BRACE20076410, BRACE20078820, BRAWH20006860, BRAWH20089030,
FCBBF100067 FCBBF10006860, FCBBF20015380, FCBBF50002610, FEBRA20004520, FEBRA20005360,
FEBRA2009010, FEBRA20014920, FEBRA20015840, FEBRA20021910, FEBRA20021940, FEBRA20043250,
FEBRA20057780, FEBRA20057880,
FEBRA20066270, FEBRA20074580, HHDPC20000550, HSYRA20015740, HSYRA20016210, IMR3210002420,
IMR3220016000, KIDNE20060140, MAMGL10000320, NT2NE20008090, NT2NE20014350, NT2RI20000640,
NT2RI20002940, NT2RI20015400, NT2RI20033830, NT2RI20037510, NT2RI20057230, NT2RI20087910,
NT2RI20089420, NT2RP70043730,
NT2RP70047900, PLACE60043120, PROST20033020, SYNOV10001280, TESTI20021490, THYMU20002360,
TRACH20012890, 3NB6910001290, BNGH420004740, BRACE20034490, BRAWH20005220, FEBRA20003770,
FEBRA20007570, FEBRA20008740, FEBRA20012450, FEBRA20012450, FEBRA20017150, FEBRA20025250,
FEBRA20044120, FEBRA20076220.
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HSYRA20002480, IMR3220014350, MESAN20001490, NHNPC20002060, NT2NE10000180, NT2NE20003920, NT2RI20006690, NT2RI20013850, NT2RI20014500, NT2RI20025540, NT2RI20033010, NT2RI20075720, NT2RP60000350, NT2RP60001230, NT2RP70028750, NT2RP70029060, NT2RP70032030, NTONG20003340, OCBBF20000130, OCBBF20002310,
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- 5 OCBBF20009040, SKNMC20000650, SMINT20003960, TESTI20026320, TESTI20080200
  - [0275] The result of comparative analysis of cDNA libraries derived from fetal heart (FEHRT) and adult heart (HEART) showed that the genes whose expression levels were different between the two were the following clones (Table 37). KIDNE20062480, NT2RI20033040, NT2RP60000350, BGGI120010970, BRACE10000420, BRACE10001150, BRACE20003320, BRACE200077980, BRAWH10000370, BRAWH20000340, BRAWH20011660, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840, BRAWH20014840
- FEBRA20008740, FEBRA20072800, HEART20000350, HEART20000990, HEART20003090, HEART20004110, HEART20004480, HEART20004920,
  - HEART20005060, HEART20005200, HEART20005680, HHDPC20001150, HLUNG20005010, HSYRA20014200, IMR3220013170, KIDNE20004970, NT2RI20000640, NT2RI20006710, NT2RI20015400, NT2RI20057230, NT2RI20064120, NT2RI20071330, NT2RI20071480, NT2RI20077540, NT2RI20084810, NT2RI20087910.
  - NT2RP70000760, NT2RP70024500, NT2RP70029060, NTONG10001820, PLACE60012810, PLACE60043120, PROST20000530, SKMUS10000640, SKMUS2000458O SKMUS20015010, SMINT20002770, TESTI20033250, TESTI20074640, UMVEN20001330
- [0276] The result of comparative analysis of cDNA libraries derived from fetal kidney (FEKID) and adult kidney (KIDNE) showed that the genes whose expression levels were different between the two were the following clones (Table 38).
  - 3NB6920003300, 3NB6920009120, BGGI120010970, BRACE20004210, BRACE20005250, BRACE20011170, BRACE20020910, BRACE20026850, BRACE20080970, BRAWH20000340, BRAWH20006970, BRAWH20011660, FCBBF20001950, FEBRA20021940, FEBRA20043250, HLUNG10000640, IMR3220007420, IMR3220014350, KIDNE10000280, KIDNE10000500.
  - KIDNE10001040, KIDNE10001430, KIDNE10001450, KIDNE10001520, KIDNE20000410, KIDNE20000510, KIDNE20000700, KIDNE20000850, KIDNE20001670, KIDNE20001920, KIDNE20002440, KIDNE20002450, KIDNE20002660, KIDNE20003150, KIDNE20003300, KIDNE20003490, KIDNE20003750, KIDNE20004030, KIDNE20004220, KIDNE20004970,
- KIDNE20005130, KIDNE20005170, KIDNE20005190, KIDNE20005740, KIDNE20031850, KIDNE20033050, KIDNE200333570, KIDNE20033770, KIDNE20033770, KIDNE20037520, KIDNE20039410, KIDNE20039940, KIDNE20040340, KIDNE20040540, KIDNE20040840, KIDNE20042620, KIDNE20042940, KIDNE20042950, KIDNE20043440,
- KIDNE20045200, KIDNE20045340, KIDNE20045790, KIDNE20046810, KIDNE20048280, KIDNE20048640, KIDNE20048790, KIDNE20049810, KIDNE20050420, KIDNE20052960, KIDNE20053360, KIDNE20054000, KIDNE20054770, KIDNE20056290, KIDNE20056760, KIDNE20059080, KIDNE20059370, KIDNE20060140, KIDNE20060300, KIDNE20060530, KIDNE20060480, KIDNE200602990, KIDNE20063530, KIDNE20061490, KIDNE20062480, KIDNE20062990, KIDNE20063530, KIDNE20063760,
- KIDNE20066520, KIDNE20067600, KIDNE20067750, KIDNE20068800, KIDNE20070050, KIDNE20070770, KIDNE20071860, KIDNE20073280, KIDNE20073520, KIDNE20073560, KIDNE20074220, KIDNE20075690, KIDNE20078100, KIDNE20078110,
  - LIVER10000790, MAMGL10000320, NB9N410000470, NT2NE20053710, NT2RI20006710, NT2RI20013420, NT2RI20016570, NT2RI20018460, NT2RI20025540, NT2RI20040590, NT2RI20065530, NT2RI20087490, NT2RI20087910, NT2RP60000350, NT2RP60001230, NT2RP70043730, NT2RP70069860, NT2RP70074220,
- OCBBF20014940, PLACE60014430, PLACE60020840, PLACE60043120, PROST10003430, SKNMC20000970, SKNSH20001510, SMINT10000160, SMINT20003960, SPLEN20000470, SPLEN20001340, SPLEN20003570, STOMA10000470, SYNOV10001280, TESTI10000700, TESTI20027070, TESTI20040310, TRACH10000300, TRACH20000790, TRACH20002500, TRACH20007800, KIDNE10000080,
- KIDNE20044110, NT2RI20033040, NT2RI20037510, NT2RP70065270, TRACH20012890
  [0277] The result of comparative analysis of cDNA libraries derived from fetal lung (FELNG) and adult lung (HLUNG) showed that the genes whose expression levels were different between the two were the following clones (Table 39).
  BNGH410001980, BRACE10000420, BRACE10001150, BRACE20014770, BRACE20018550, BRAWH20006970, BRAWH20014610, FEBRA20008810, FEBRA20015840, FEBRA20044120, HHDPC20001490, HLUNG10000240.
- 55 HLUNG10000300, HLUNG10000370, HLUNG10000640, HLUNG10000760, HLUNG10000990, HLUNG10001050, HLUNG10001100, HLUNG20000680,
  - HLUNG20001160, HLUNG20001250, HLUNG20001420, HLUNG20001760, HLUNG20002550, HLUNG20003140, HLUNG20004120, HLUNG20004800, HLUNG20005010, HSYRA20014200, KIDNE20002660, KIDNE20033050,

NT2NE20014350, NT2RI20016570, NT2RI20026540, NT2RI20051500, NT2RI20064120, NT2RI20083960, NT2RI20085260, NT2RI20087490,

NT2RP7009060, NT2RP70011660, NT2RP70029060, NT2RP70055020, NT2RP70074220, NT2RP70076100, NTONG10002460, NTONG20008000, PLACE60043120, SKMUS20016340, SKNMC20005930, SMINT20000180, SMINT20002390, SMINT20002770, SMINT20003960, STOMA10000470, STOMA20001880, SYNOV20013740, TESTI20036250, TESTI20080200,

TRACH20004610, BRACE20004210, IMR3220007420

[0278] These genes are involved in regeneration of tissues and/or cells.

#### 10 EXAMPLE 8

#### Expression frequency analysis by PCR

[0279] Specific PCR primers were prepared based on the full-length nucleotide sequences, and the expression frequency was analyzed by the ATAC-PCR method (Adaptor-tagged competitive PCR method: Nucleic Acids Research 1997, 25(22): 4694-4696; "DNA Micro-array and Advanced PCR Techniques", Cell Technology, supplement, Eds., Muramatsu and Nawa (Shujunsha, 2000): 104-112). Inflammation-related genes can be identified by revealing the genes whose expression levels are altered depending on the presence of an inflammation-inducing factor. Then, by using THP-1 cell line, which is a cell line of monocyte line, and TNF-α and LPS, both of which are inflammation-inducing factors, suitable for this system, the genes whose expression levels are altered depending on the presence of the factors were searched for by the system.

[0280] THP-1 cell line (purchased from DAINIPPON PHARMACEUTICAL) was cultured to be confluent in RPMI1640 medium (sigma) containing 5% fetal calf serum (GIBCO BRL). Then, the medium was changed with the medium containing 10 ng/ml TNF- $\alpha$  (human recombinant TNF- $\alpha$ ; Pharmacia Biotech) or 1 µg/mL LPS (Lipopolysaccharides; sigma), and the culture was continued at 37°C under 5% CO $_2$ . After three hours, the cells were harvested, and total RNA was extracted from them by using ISOGEN reagent (Nippon Gene). The extraction was carried out according to the method in the document attached to ISOGEN reagent. In addition, total RNA was also extracted from the cells cultured without stimulation of TNF- $\alpha$  or LPS.

[0281] The genes involved in the onset of gastritis and gastroduodenal ulcer induced by the infection of *Helicobacter pylori* to the epithelia of stomach can be identified by revealing the genes whose expression levels are altered depending on co-culturing the cells with Helicobacter *pylori*. Then, by using co-culture of a gastric cancer cell line with *Helicobacter pylori*, suitable for this system, the genes whose expression levels are altered depending on the presence of *Helicobacter pylori*, were searched for by the system.

[0282] A gastric cancer cell line MKN45 (provided by the Cell Bank, RIKEN GENE BANK, The Institute of Physical and Chemical Research) was cultured to be confluent in RPMI1640 medium (sigma) containing 10% fetal calf serum (GIBCO BRL). Then, the medium was changed with the medium containing 100-fold excess (in terms of the number of cells or the number of colonies) of *Helicobacter pylori* (TN2 strain: provided by Prof. Omata, Faculty of Medicine, The University of Tokyo), as compared with the number of the cancer cells. The culture was continued at 37°C under 5% CO<sub>2</sub>. After three hours, the cells were harvested, and total RNA was extracted from them by using ISOGEN reagent (Nippon Gene). The extraction was carried out according to the method in the document attached to ISOGEN reagent. In addition, total RNA was also extracted from the cells cultured without *Helicobacter pylori*.

[0283] The analysis by the ATAC-PCR method was carried out basically according to "DNA Micro-array and Advanced PCR Techniques", Cell Technology, supplement (Genome Science Series 1, Eds., Muramatsu and Nawa (Shujunsha, 2000): 104-112). Adapter ligation to the internal standard sample (sample to make the calibration curve for the clone of interest) and test sample was carried out in the two separate reaction systems indicated below. The combination of 6 types of adapters (AD-1, AD-2, AD-3, AD-4, AD-5 and AD-6: see the sequences indicated below) and the samples are as follows.

#### Reaction system A

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AD1; internal standard, 10-fold AD2; THP-1 cells, unstimulated AD3; internal standard, 3-fold AD4; THP-1 cells, TNF-α stimulation AD5; THP-1 cells, LPS stimulation AD6; internal standard, 1-fold

Reaction system B

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AD1; internal standard, 1-fold
AD2; MKN45 cells, unstimulated
AD3; internal standard, 3-fold
AD4; MKN45 cells, co-cultured with Helicobacter pylori
AD5; internal standard, 10-fold
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#### Adapter sequences:

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10
      AD1;
      SEO ID NO: 3283//5'-GTACATATTGTCGTTAGAACGCG-3'
      SEO ID NO: 3284//3'-CATGTATAACAGCAATCTTGCGCCTAG-5'
15
      AD2;
      SEQ ID NO: 3285//5'-GTACATATTGTCGTTAGAACGCGACT-3'
      SEQ ID NO: 3286//3'-CATGTATAACAGCAATCTTGCGCTGACTAG-5'
      AD3;
20
      SEQ ID NO: 3287//5'-GTACATATTGTCGTTAGAACGCGCATACT-3'
      SEQ ID NO: 3288//3'-CATGTATAACAGCAATCTTGCGCGTATGACTAG-5'
      AD4;
25
      SEQ ID NO: 3289//5'-GTACATATTGTCGTTAGAACGCGATCCATACT-3'
      SEQ ID NO: 3290//3'-CATGTATAACAGCAATCTTGCGCTAGGTATGACTAG-5'
      AD5;
30
      SEO ID NO: 3291//5'-GTACATATTGTCGTTAGAACGCGTCAATCCATACT-3'
      SEO ID NO: 3292//3'-CATGTATAACAGCAATCTTGCGCAGTTAGGTATGACTAG-5'
      AD6:
      SEQ ID NO: 3293//5'-GTACATATTGTCGTTAGAACGCGTACTCAATCCATACT-3'
35
      SEQ ID NO: 3294//3'-CATGTATAACAGCAATCTTGCGCATGAGTTAGGTATGACTAG-
      5′
```

40 [0284] The internal standard sample used for this assay was a mixture of total RNAs of THP-1 Control, MKN45 Control, NT2 (Stratagene; catalog No. 204101). RNA preparation from the culture cells was carried out according to the standard method.

[0285] The sequences of primers specific to the genes and the names of clones of interest in the analysis are as follows. The gene specific primers were designed to produce the PCR products of 70 to 200 bp, which are derived from the adapter-containing cDNA. The sequence of adapter-specific primer (labeled with fluorescence (FAM)) used in the competitive PCR was GTACATATTGTCGTTAGAACGC (22 nucleotides; SEQ ID NO: 3295). PCR was basically carried out with a cycling profile of preheating at 94°C for 3 minutes, and 30 cycles of denaturation at 94°C for 30 seconds/annealing at 50°C for 60 seconds/extension at 72°C for 90 seconds; in some cases, merely the annealing temperature was changed.

The nucleotide sequences of clone specific primers used in the experiments

[0286] Clone name, primer sequence and SEQ ID NO are indicated below in this order. Each is demarcated by a double slash mark (//).

	3NB6920000290//CTCCTCCAGCAGAACTTG//SEQ ID NO	<b>):</b> 3:	296
	ADRGL10000180//TTTAGAGCTGATTCCCCATT//SEQ ID	NO:	3297
5	BNGH410001370//TAAAAGCAGGAAATTGTAAA//SEQ ID	NO:	3298
	BRACE10001590//ATATGGACAAAGGACCAATT//SEQ ID	NO:	3299
	BRACE10001690//AGGACTAGATTCACTGCTTA//SEQ ID	NO:	3300
10	BRACE20010650//CAACTCTCAACACCACAATC//SEQ ID	NO:	3301
	BRACE20013400//CTACTCAAGGACAGCCACAC//SEQ ID	NO:	3302
	BRACE20030780//AGATAGAGGCTTGCTGGTGT//SEQ ID	NO:	3303
	BRACE20034490//CCTTATGTCAAACTGCGATT//SEQ ID	NO:	3304
15	BRACE20077640//TTTGCCTTATTCATTGGTTG//SEQ ID	NO:	3305
	BRACE20079530//GTAATATCACCCCACAGAGG//SEQ ID	NO:	3306
	BRACE20083850//TATCATCTTTTGGGGCTTTG//SEQ ID	ΝО:	3307
20	BRACE20091880//AATAAGCCAGTTGCATCCTC//SEQ ID	NO:	3308
	BRAWH10001620//TCTCTCATCTCCAAACATGC//SEQ ID	NO:	3309
	BRAWH20004430//TGAATTGAAAGAGACACACT//SEQ ID	NO:	3310
25	FCBBF10006180//CTTAATCCAGTTCATCAGCT//SEQ ID	NO:	3311
	FEBRA20003780//TTTTGAGACAGAGTTTCGCT//SEQ ID	NO:	3312
	FEBRA20006800//ATGTTTTACGATTGCCTTTG//SEQ ID	NO:	3313
30	FEBRA20008810//GAAGCATCTTTGGTGTACTA//SEQ ID	NO:	3314
50	FEBRA20012940//TGTCCCTGGAAAGTAATATA//SEQ ID	NO:	3315
	FEBRA20015840//AACACAGTAGCCAGAACCAG//SEQ ID	NO:	3316
	HCASM10000610//AAGAGCCTACTACACGCCAG//SEQ ID	NO:	3317
35	HEART20000350//TTTAAGAGCACAGAAGTC//SEQ ID	NO:	3318
	HEART20004480//ATTACTGGTGTGGAGTGGGT//SEQ ID	NO:	3319
	HEART20005060//ACTCTGCCTTCACTTTCCTT//SEQ ID	мо:	3320
40	HHDPC20000950//GATAAAGGATACAGCCAAAA//SEQ ID	NO:	3321
	HLUNG10000370//ATCATGGTCGTTACAGAATT//SEQ ID	NO:	3322
	HLUNG20001160//ACTGCCTTCAATCTCAGGTT//SEQ ID	NO:	3323
45	HLUNG20001760//ATCACTGCCAATTTCACAAA//SEQ ID		
	HSYRA20003470//CCACCGAGTTCTGTTG//SEQ ID NO:		
	HSYRA20013320//GTCATGGCCACAGTTGTTATC//GTO ID	NO.	2226

	IMR3210001580//GATAAAGGATACAGCCAAAA//SEQ	ΙD	NO:	3327
	IMR3210002660//CCCAAAATGTGTATTATTCA//SEQ	ID	NO:	3328
5	IMR3220008380//TTCGGCAATAATCTTCTCTT//SEQ	ID	NO:	3329
	IMR3220008590//CCACCAACACTTAGACATCA//SEQ	ID	NO:	3330
	KIDNE10001520//GAATTATAGGTGCACAACAC//SEQ	ΙD	NO:	3331
10	KIDNE20000850//TCTTCTAGTGGAAGAGGTTTA//SEQ	ID	NO:	3332
	KIDNE20003490//TATCTGAAAATGTGTTTGGT//SEQ	ID	NO:	3333
	KIDNE20005170//ACTCCTGGCTTTCTATTTCC//SEQ	ID	NO:	3334
15	KIDNE20033730//GACAGTCTCGCTGTATCTCC//SEQ	DI	NO:	3335
,,	KIDNE20040540//ACATCCAGTACACCTTCTCC//SEQ	ID	NO:	3336
	KIDNE20050420//GTCGAAAGTGTTGCTCCTAG//SEQ	σI	NO:	3337
	KIDNE20061490//TCATAGCTGAGGGGTTAAGT//SEQ	ID	NO:	3338
20	KIDNE20062990//ATAGCTCTTGTTTCAGTGTG//SEQ	σı	ΝΟ:	3339
	LIVER20000330//AAGCATGTGGGAGTTATTTA//SEQ	ID	NO:	3340
	NT2NE10001630//CTTGAGAGTCCAGGTTTCCT//SEQ	ID	ΝΟ:	3341
25	NT2NE10001850//CCCATAAAGAATAGAAGCTC//SEQ	ID	NO:	3342
	NT2NE20003920//CTCATGGGGCTAAGTCTATT//SEQ	ID	ΝО:	3343
	NT2NE20005500//TCAAAGTCCAGGATAGCATT//SEQ	ID	NO:	3344
30	NT2RI20009740//ACTGATTTGGTTCTGCGATT//SEQ	ID	NO:	3345
	NT2RI20014500//CTTACTTCGAGTTCTAGCAC//SEQ	ID	NO:	3346
	NT2RI20016570//TGCTGCTCATGTTAAACTTG//SEQ	ID	NO:	3347
	NT2RI20018660//AAACATCATCTCTTCCTTGG//SEQ	ID	NO:	3348
35	NT2RI20021520//GCTGAAGAGAACAATAAGTC//SEQ	ID	NO:	3349
	NT2RI20050870//GACAGAGTAGTGGGGCATCT//SEQ	ID	NO:	3350
	NT2RI20053350//TTCAGCAGGTAGACAACATC//SEQ	ID	ио:	3351
40	NT2RI20070480//CCTCTCTTTCAGTTGAGCAT//SEQ	ID	NO:	3352
	NT2RI20073030//GGGCTTGTTTTACGC//SEQ ID NO	): 3	3353	
	NT2RI20078270//CCTAGGCAGTAACATGAAAA//SEQ	ID	ио:	3354
45	NT2RI20078790//GCAGACAGGTACAGCTGAGT//SEQ	ID	ио:	3355
	NT2RI20083360//TTATTTTAGTTACCTTGGCA//SEQ	ID	NO:	3356
	NT2RP60000080//ACTGTAAATCTCCTTGCCTT//SEQ	ID	ио:	3357
50	NT2RP60000390//GAGTTTGGGGACAGTCAAGT//SEQ	ID	NO:	3358
50	NT2RP60000590//AAATGCAAAATTGCTGAGAT//SEQ			3359
	NTONG10000980//TTCAGCAGGTAGACAACATC//SEQ			
	NTONG10002570//GTCGCTGAAATTTGCTTCTT//SEQ			3361
55	PLACE60020160//CCATATCCACTTTCATCATC//SEQ	ID	ΝО:	3362

PLACE60026990//CAAGAAACTGACAATCACGG//SEQ	ID	NO:	3363
PLACE60047380//AAGGAGTTGACATTTTGCTG//SEQ	ID	NO:	3364
PUAEN10003220//TTTTCAGAGGGCTTTGTGTT//SEQ	ID	NO:	3365
SKNMC10000290//ATAACTGAACCCATGGAAAG//SEQ	ID	NO:	3366
SKNMC10001590//ACATCCAGTACACCTTCTCC//SEQ	ID	NO:	3367
SKNMC20000650//GCACTAGGAGACTGTCAAAA//SEQ	ID	NO:	3368
STOMA20002570//GGTATCTTGGAGCTCCTCAG//SEQ	ID	NO:	3369
STOMA20002890//GTCAGCATCTACTCTGGGTC//SEQ	ID	NO:	3370
SYNOV20001770//AAGAAATAAACACACGAAAA//SEQ	ID	NO:	3371
TESTI10000230//AAATGCAAAATTGCTGAGAT//SEQ	ID	NO:	3372
TESTI10000550//CAGAACACTCCTCATACCTC//SEQ	ID	NO:	3373
TESTI20011340//AAAGTACAGCAGAAGATGGG//SEQ	ID	NO:	3374
THYMU10005580//AACAGCTTCTTCATCACAGT//SEQ	ID	NO:	3375
TRACH10000630//ATAGAGGAAGGTGGCAACTG//SEQ	ID	NO:	3376
TRACH20001960//CTCTTTTCCATCACATTCCC//SEQ	ID	NO:	3377
UMVEN10001220//CCAAGTTCTCATTCCACATT//SEQ	ID	NO:	3378
UMVEN20001330//AGCTAACAAGGTTTTGACAC//SEQ	ID	NO:	3379
UTERU20004850//AGACTGGGTCTTGCCATACT//SEQ	ID	NO:	3380

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[0287] The result of expression frequency analysis is shown in Table 40. The clones not shown in the table contain clones whose expression levels could not be measured because the levels were too low or the sizes of the PCR products were different from the expected. It was confirmed that the expression levels of TNF- $\alpha$ , IL-1, and IL-8 genes used as positive control genes were elevated.

[0288] The result obtained by the search for the genes whose expression levels were altered depending on the presence of TNF-α or LPS in culturing THP-1 cell, which is a human monocyte cell line, showed that the clones whose expression levels were elevated by twofold or more depending on the TNF-α stimulation (the clones whose expression levels were 0.1 or lower both before and after the stimulation were excluded), were

ADRGL10000180, BRACE20030780, BRACE20077640, BRACE20083850, BRAWH20004430, FCBBF10006180, FEBRA20003780, FEBRA20006800, FEBRA20012940, FEBRA20015840, HEART20004480, HLUNG10000370, HLUNG20001160, HSYRA20013320, IMR3220008380, KIDNE10001520, KIDNE20040540, KIDNE20061490, KIDNE20062990, NT2NE10001630, NT2NE20003920, NT2NE20005500, NT2RI20014500, NT2RI20016570, NT2RI20078270, NT2RI20083360, NTONG10002570, PUAEN10003220, SKNMC10000290, STOMA20002570, TESTI20011340, UTERU20004850.

[0289] Further, the clones whose expression levels were elevated by twofold or more depending on the LPS stimulation (the clones whose expression levels were 0.1 or lower both before and after the stimulation were excluded), were FCBBF10006180, FEBRA20015840, HLUNG10000370, HLUNG20001160, HSYRA20013320, KIDNE20040540, KIDNE20061490, NT2NE10001630, NT2NE20003920, NT2NE20005500, NT2RI20014500, NT2RI20016570, NT2RI20078270, NTONG10002570, PUAEN10003220, STOMA20002570, TESTI20011340. These genes whose expression levels were elevated by LPS stimulation, were all up-regulated by the TNF-α stimulation.

[0290] On the other hand, with respect to the genes whose expression is suppressed, in particular cases where the expression levels were relatively high in the unstimulated cells (the relative value were 1 or higher), the clones whose expression levels were decreased by twofold or more by the TNF- $\alpha$  stimulation, were BRACE20013400, BRACE20091880, HEART20005060, HLUNG20001760, IMR3220008590, NT2NE10001850, NT2RI20018660, NT2RI20053350, NT2RI20070480, PLACE60047380, STOMA20002890, SYNOV20001770, TRACH20001960. Further, when the levels were normalized by using the ratio of the expression level of  $\beta$ -actin widely used in data normalization for gene expression level, the clones whose expression levels were decreased by tenfold or more depending on the LPS stimulation, were BRACE20013400, BRACE20091880, HEART20005060, HLUNG20001760,

NT2RI20070480, UMVEN20001330. Among the genes whose expression levels were decreased by TNF- $\alpha$  stimulation, the genes whose expression levels were also decreased by the LPS stimulation were BRACE20013400, BRACE20091880, HEART20005060, HLUNG20001760, NT2RI20070480.

[0291] These clones were thus revealed to be involved in the inflammation reaction induced by TNF- $\alpha$  or LPS.

[0292] The result obtained by the search for the genes whose expression levels were altered depending on co-culturing gastric cancer cell line MKN45 with *Helicobacter pylori*, showed that the clones whose expression levels were elevated by twofold or more depending on the presence of *Helicobacter pylori* (the clones whose expression levels were 0.1 or lower both before and after the stimulation were excluded), were BRACE10001590, BRACE20079530, BRAWH10001620, FEBRA20006800, KIDNE2003490, KIDNE20040540, KIDNE20050420, NT2NE10001850, STOMA20002890, SYNOV20001770. TESTI10000550, UTERU20004850. Of the clones, FEBRA20006800, KIDNE20040540 and UTERU20004850 were also up-regulated by TNF- $\alpha$  stimulation in the human monocyte cell line THP-1.

[0293] On the other hand, with respect to the genes whose expression is suppressed, in particular cases where the expression levels were relatively high in the unstimulated cells in (the relative value were 1 or higher), when the levels were normalized by using the ratio of the expression level of  $\beta$ -actin widely used in data normalization for gene expression level, the clones whose expression levels were decreased by fivefold or more in the presence of *Helicobacter pylori*, were BRACE20034490, BRACE20077640, BRACE20083850, KIDNE20005170, LIVER20000330, NT2RP60000390, NTONG10000980, UMVEN20001330.

[0294] These clones are involved in gastritis or gastroduodenal ulcer.

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Table 3

Clone ID	CD34C	D30ST	D60ST	D90ST
KIDNE20062480	0	4.908	0	5.748
NT2R120016570	0	7.035	0	8.24
PLACE60020840	0	8.776	0	20.558
3NB6920002810	0	0	0	4.74
BRAGE20035270	0	0	0	33.245
BRAWH20000340	0	0	0	40.521
FEBRA20062700	0	0	0	35.533
HSYRA20011030	o	0	0	9.617
NT2RP70030910	0	0	0	39.804
OCBBF20011240	0	0	0	44.145
PLACE60043120	0	0	0	15.442
SYNOV20011440	0	0	0	15.55
HCASM10001150	0	0	40.145	0
IMR3220016000	0	0	13.886	0
NT2RI20082210	0	0	79.241	0
D30ST20001840	0	100	0	0
FEBRA20012940	0	37.059	0	0
FEBRA20021910	0	63.399	0	0
IMR3220002230	0	10.991	0	0
IMR3220012180	0	18.197	0	0
NT2R120000640	0	9.996	0	0
NT2R120010910	0	46.971	0	0
NT2R120058110	0	20.306	0	0
NT2RP60000350	0	4.385	0	0
NT2RP70011660	0	8.936	0	0
PEBLM20003950	0	14.226	0	0
PLACE60049310	0	68.294	0	0
PROST2006260	0	66.053	0	0
TEST120007840	0	7.864	0	0
TEST120040310	0	8.52	0	0
TESTI20080200	0	4.493	0	0

Table 3 (continued)

Clone ID	CD34C	D30ST	D60ST	D90ST
THYMU10003590	0	9.698	0	ō
TRACH10000630	0	34.338	0	0
TRACH20007800	0	18.508	0	0
CD34C20000510	100	0	0	0
HSYRA20016210	. 5.607	0	0	3.6
KIDNE20004030	66.99	0	0	0
KIDNE20073280	54.663	0	0	0
NT2RP70055020	58.521	0	0	0
PLACE60043960	58.654	16.078	0	0
SKMUS10000220	57.743	0	0	0

Table 4						
Clone ID	NT2RM	NT2RP	NT2RI	NT2NE		
SKNMC20000970	19	2.312	0.784	1.188		
3NB6920009120	0	2.916	1.978	8.993		
BRAWH20006970	0	4.004	2.717	4.117		
KIDNE20062480	0	1.503	7.137	3.09		
NHNPC20002060	0	1.674	1.136	5.165		
NT2NE20053710	0	7.977	0.773	2.343		
NT2R120000640	0	1.53	1.038	3.147		
NT2R120004210	0	29.541	40.087	30.373		
NT2RI20006710	0	2.481	1.683	2.551		
NT2RI20009740	0	13.985	9.489	14.379		
NT2RI20013420	0	4.074	1.382	2.094		
NT2RI20013850	0	6.297	4.273	2.158		
NT2RI20014100	0	53.957	18.305	27.738		
NT2RI20025410	0	17.546	11.905	18.04		
NT2RI20033040	0	3.342	3.401	3.436		
NT2RI20035560	0	28.514	3.869	5.864		
NT2RI20036950	0	4.691	9.549	4.823		
NT2RI20051500	0	3.392	9.205	10.462		
NT2RI20053350	0	2.329	1.581	2.395		
NT2RI20057230	0	2.418	1.641	7.458		
NT2RI20071330	0	13.599	9.227	6.991		
NT2RI20075720	0	4.321	2.932	4.443		
NT2RI20083960	0	8.389	5.692	8.625		
NT2RI20087910	0	5.711	1.938	2.936		
NT2RI20090650	0	2.967	6.039	3.051		
NT2RI20094060	0	26.699	18.115	13.726		
NT2RP60000350	0	5.37	4.554	4.141		
NT2RP70000760	0	4.602	3.122	4.732		
NT2RP70036800	0	6.556	8.897	6.741		
NT2RP70071770	0	18.93	6.422	9.732		
NT2RP70074220	0	4.004	2.717	4.117		
TESTI20007840	0	19.261	3.267	4.951		
TESTI20080200	0	1.375	1.867	1.414		
3NB6920002810	0	1.239	0.841	0		
3NB6920005450	0	7.198	4.884	0		

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	HSYRA20015740	0	8.09	5.489	0
5	HSYRA20016210	0	2.353	1.277	0
	IMR3220016000	0	1.458	0.989	0
	KIDNE20060140	0	14.005	9.502	0
	NT2R120014490	0	29.632	70.368	0
	NT2R120015950	0	59.577	40.423	0
10	NT2RI20022520	0	59.577	40.423	0
	NT2RI20025170	0	59.577	40.423	0
	NT2RI20025540	0	5.634	3.823	0
	NT2R120030510	0	15.012	10.186	0
15	NT2RI20040590	0	13.827	9.381	0
	NT2RI20046060	0	9.661	13.11	0
	NT2RI20053680	0	3.443	4.672	0
	NT2RI20058510	0	12.325	16.726	0
	NT2RI20066820	0	32.943	67.057	0
20	NT2RI20067030	0	59.577	40.423	0
	NT2RI20074980	0	6.002	24.433	0
	NT2RI20075890	0	12.002	8.144	0
	NT2RI20078840	0	22.336	7.578	0
25	NT2RI20084810	0	12.646	12.87	0
	NT2RI20089420	0	17.837	18.153	0
	NT2RP70002380	0	44.979	15.259	0
	NT2RP70023790	0	2.283	1.549	0
	NT2RP70029820	0	15.713	10.661	0
30	NT2RP70049150	0	59.577	40.423	0
	NT2RP70055020	0	4.911	3.332	0
	NT2RP70065270	0	1.664	1.129	0
	NT2RP70069860	0	10.864	7.371	0
35	NT2RP70075370	0	7.229	1.635	0
	NT2RP70079750	0	3.104	2.106	0
	NT2RP70092590	0	17.381	11.793	0
*	OCBBF20000130	0	7.346	19.936	0
	PLACE60043970	0	12.827	4.352	0
40	TESTI20053960	0	24.609	5.566	0
	BNGH420004740	0	2.789	0	2.867
	HSYRA20002480	0	2.789	0	2.867
	NT2NE10000730	0	24.483	0	75.517
45	NT2NE20000560	0	4.458	0	4.584
	NT2NE20003270	0	28.131	0	14.462
	NT2NE20008090	0	34.048	0	17.504
	NT2NE20014030	0	17.216	0	35.403
50	NT2RP60000720	0	5.865	0	3.015
50	NT2RP60001090 NT2RP70004770	0	3.47 22.083	0	3.568 11.353
		1	1		
	NT2RP70010800 NT2RP70011660	0	59.331 5.472	0	40.669 2.813
	NT2RP70011660 NT2RP70028750	0	7.823	0	1.609
55	NT2RP70028750 NT2RP70029060	0	3.063	0	9.449
	NT2RP70029000 NT2RP70030550	0	49.305	0	50.695
	NT2RP70032030	0	8.843	0	4.546
l	1172111 70002000		0.040		7,040

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	NT2RP70036320 -		8.861	0	9.111
5	NT2RP70064900	0	32.803	0	33.727
	NT2RP70093220	0	32.957	0	33.885
	NT2RP70093730	0	29.95	0	30.794
	SYNOV20013740	0	11.184	0	11.499
	TEST 120021490	0	20.062	0	6.876
10	TRACH20004720	0	5.169	0	2.657
	TRACH20007800	0	11.333	0	11.652
	3NB6920003300	0	0	0.71	1.076
	BRACE10000200	0	0	18.865	28.588
15	BRACE20018550	0	0	16.357	12.393
· ·	FEBRA20008740	0	0	2.493	3.778
	FEBRA20074580	0	0	23.056	34.938
	FEBRA20076220	0	0	6.122	2.319
	KIDNE20073520	0	0	4.038	3.06
20	MAMGL10000320	0	0	0.39	0.591
	NT2NE20002140	0	0	7.614	11.538
	NT2NE20006360	0	0	18.047	54.696
	NT2NE20007870	0	0	3.883	11.767
25	NT2NE20009800	0	0	39.756	60.244
	NT2NE20035690	0	0	14.209	10.766
	NT2RI20002940	0	0	12.546	19.012
	NT2RI20014500	0	0	3.454	5.235
	NT2RI20016210	0	0	21.272	16.117
30	NT2RI20029260	0	0	18.069	54.761
	NT2RI20037510	0	0	3.361	5.094
	NT2RI20055640	0	0	19.702	29.855
	NT2RI20064120	0	0	2.899	4.393
35	NT2RI20074390	0	0	39.756	60.244
	NT2RI20077230	0	0	14.643	11.094
	NT2RI20090660	0	0	5.676	17.202
	PLACE60040050	0	0	3.883	11.767
	TRACH20012890	0	0	4.391	2.218
40	3NB6910001730	0	0	0	2.934
	BRAGE10001150	0	0	0	1.941
	BRACE20011170	0	0	0	3.434
	BRACE20020910	0	0	0	19.866
45	BRACE20035270	0	0	0	8.935
	BRAWH20005220	0	0	0	12.892
	FEBRA20003970	0	0	0	36.013
İ	FEBRA20012450	0	0	0	13.643
	HLUNG20003140	0	0	0	13.547
50	IMR3220009350	0	0	0	4.198
	IMR3220013170	0	0	0	4.4
,	IMR3220013320	0	0	0	2.646
	IMR3220014350	0	0	0	4.254
55	NT2NE10000040	0	0	0	49.427
	NT2NE10000140	0	0	0	100
1	NT2NE10000180	0	0	0	9.321
	NT2NE10000230	0	0	0	100

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	NT2NE10000630	0	0		100
_	NT2NE10000830	0	0		
5				0	100
	NT2NE10001200 NT2NE10001630	0	0	0	100
				0	100
	NT2NE10001850	0	0	0	60.858
10	NT2NE20000380	0	0	0	64.993
	NT2NE20000640	0	0	0	100
	NT2NE20001740	0	0	0	11.757
	NT2NE20002590	0	0	0	30.217
	NT2NE20002990	0	0	0	100
15	NT2NE20003690	0	0	0	100
	NT2NE20003840	0	0	0	3.017
	NT2NE20003920	0	0	0	9.486
	NT2NE20004550	0	0	0	100
20	NT2NE20004700	0	0	0	33.507
20	NT2NE20005170	0	0	0	61.289
	NT2NE20005360	0	0	0	100
	NT2NE20005500	0	0	0	100
	NT2NE20005860	0	0	0	100
25	NT2NE20006580	0	0	0	100
	NT2NE20007060	0	0	0	100
	NT2NE20007630	0	0	0	15.634
	NT2NE20008020	0	0	0	100
	NT2NE20011560	0	0	0	40.371
30	NT2NE20012470	0	0	0	100
	NT2NE20013240	0	0	0	100
	NT2NE20013370	0	0	0	100
	NT2NE20013640	0	0	0	49.334
35	NT2NE20013720	0	0	0	100
	NT2NE20014280	0	0	0	100
	NT2NE20014350	0	0	0	7.004
	NT2NE20015300	0	0	0	22.636
	NT2NE20016230	0	0	0	100
40	NT2NE20016260	0	0	0	100
	NT2NE20016340	0	0	0	100
	NT2NE20016480	0	0	0	100
	NT2NE20016660	0	0	0	100
45	NT2NE20016970	0	0	0	61.289
	NT2NE20034080	0	0	0	100
	NT2NE20044900	0	0	0	100
	NT2NE20047160	0	0	0	43
	NT2NE20054410	0	0	0	34.749
50	NT2NE20055170	0	0	0	100
	NT2NE20057200	0	0	0	71.845
	OCBBF20009040	0	0	0	38.34
	OCBBF20015860	0	0	0	24.825
55	PLACE60020840	0	0	0	8.288
55	PROST10005260	0	0	0	11.86
	SKMUS20008630	0	0	0	2.785
	SMINT20003960	0	0	0	1.689
1					

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	STOMA20001210	ō	0	0	- <b>-</b> 2. 199
5	SYNOV20011440	0	0	0	4.179
	TESTI10000230	0	0	0	4.142
	TESTI20009700	0	0	0	15.218
	TESTI20040310	0	0	0	5.364
	THYMU10003290	0	0	0	34.388
10	TRACH20013950	0	0	0	12.004
	BGGI120010970	0	0	2.974	0
	BNGH410001980	0	0	20.55	0
	BRACE10001660	0	0	11.3	0
15	BRACE20014770	0	0	8.968	0
	BRACE20034490	0	0	6.108	0
	BRACE20071740	0	0	27.924	0
	BRAWH20009440	0	0	11.189	0
	BRAWH20036930	0	0	19.379	0
20	CTONG20020730	0	0	25.686	0
	CTONG20028030	0	0	26.479	0
	FCBBF10006750	0	0	26.462	0
	FCBBF20012110	0	0	19.363	0
25	FCBBF20015380	0	0	3.168	0
	FEBRA20007570	0	0	1.649	0
	FEBRA20043250	0	0	8.353	0
	FEBRA20068730	0	0	6.35	0
	HCASM10001150	0	0	1.43	0
30	HCASM20002140	0	0	2.71	0
	HHDPC20000950	0	0	4.733	0
	HHDPC20004620	0	0	25.354	0
	HSYRA10001370	0	0	10.795	0
35	HSYRA10001780	0	0	7.211	0
	HSYRA20001350	0	0	7.505	0
	HSYRA20006050	0	0	17.911	0
	IMR3210001580	0	0	5.369	0
	IMR3220002230	0	0	4.566	0
40	IMR3220003020	0	0	4.387	0
	KIDNE20004030	0	0	3.815	0
	KIDNE20060300	0	0	1.994	0
	KIDNE20073280	0	0	6.225	0
45	MESAN20005010	0	0	24.967	0
	NT2RI10000160	0	0	100	0
	NT2RI10000270	0	0	38.568	0
	NT2RI10000480	0	0	55.06	0
	NT2RI10001640	0	0	100	0
50	NT2RI20002700	0	0	100	0
	NT2RI20002820	0	0	100	0
	NT2RI20003410	0	0	100	0
	NT2RI20004120	0	0	15.349	0
55	NT2RI20005970	0	0	100	. 0
	NT2RI20006690	0	0	6.222	0
	NT2RI20006850	0	0	29.216 100	0
ì	NT2RI20007380	0	0	100	0

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	NT2RI20008650			100	
5	NT2RI20010100	0	0	55.06	0
	NT2RI20010830	0	0	100	0
	NT2RI20010910	0	0	9.758	0
	NT2RI20012350	0	0	100	0
	NT2RI20012440	0	o	100	0
10	NT2RI20014090	0	0	23.941	0
	NT2RI20015190	0	0	100	0
	NT2RI20015400	0	0	0.383	0
	NT2RI20016570	0	0	1.461	0
15	NT2RI20017260	0	0	73.33	0
	NT2RI20018460	0	0	14.383	0
	NT2RI20018660	0	0	50.642	0
	NT2R120020220	0	0	39.883	0
	NT2RI20020410	0	0	100	0
20	NT2RI20021520	0	0	14.03	0
	NT2R120022430	0	0	22.43	0
	NT2RI20022700	0	0	100	0
	NT2RI20025300	0	0	25.585	0
25	NT2RI20025850	0	0	25.193	0
	NT2RI20026540	0	0	5.201	0
	NT2RI20028020	0	0	39.201	0
	NT2RI20028520	0	0	62.741	0
	NT2RI20029580	0	0	8.861	0
30	NT2RI20029700	0	0	100	0
	NT2RI20030110	0	0	2.725	0
	NT2RI20030190	0	0	28.31	0
	NT2RI20030670	0	0	100	0
35	NT2RI20031540	0	0	100	0
	NT2RI20032050	0	0	100	0
	NT2RI20032220	0	0	100	0
	NT2RI20033010	0	0	17.133	0
	NT2RI20033380	0	0	6.678	0
40	NT2RI20033440	0	0	31.421	0
	NT2RI20033830	0	0	21.125	0
	NT2RI20036780	0	0	100	0
	NT2RI20041900	0	0	100	0
45	NT2R120042840	0	0	21.943	0
	NT2RI20043040	0	0	28.031	0
	NT2RI20043980	0	0	16.393	0
	NT2RI20044420	0	0	100	0
	NT2RI20047830	0	0	100	0
50	NT2RI20048400	0	0	100	0
	NT2RI20049160	0	0	100	0
	NT2RI20049840	0	0	51.095	0
	NT2RI20049850	0	0	17.16	0
55	NT2RI20050610	0	0	34.993	0
	NT2RI20050870	0	0	100	0
	NT2RI20056280	0	0	100	0
	NT2R120056470	0	0	0.508	0

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	NT2R120058110	0	0	12.655	70
5	NT2RI20060710	0	0	18.232	0
	NT2R120060720	0	0	36.029	0
	NT2R120061270	0	0	100	0
	NT2RI20061830	0	0	32.269	0
	NT2RI20062100	0	0	4.387	0
10	NT2RI20063450	0	0	100	0
	NT2RI20064870	0	0	100	0
	NT2RI20065060	0	0	56.418	0
	NT2RI20065530	0	0	2.339	0
15	NT2RI20066670	0	0	100	0
	NT2RI20066790	0	0	100	0
	NT2RI20067350	0	0	28.093	o
	NT2RI20067880	0	0	100	0
	NT2RI20068250	0	0	39.94	0
20	NT2RI20068550	0	0	34.304	0
	NT2RI20070480	0	0	100	0
	NT2RI20070840	0	0	5.538	0
	NT2RI20070960	0	0	39.827	0
25	NT2RI20071160	0	. 0	100	0
	NT2RI20071480	0	0	8.058	0
	NT2RI20072140	0	0	100	0
	NT2RI20072540	0	0	21.715	0
	NT2RI20073030	0	0	100	0
30	NT2RI20073840	0	0	57.89	0
	NT2RI20073860	0	0	100	0
	NT2RI20074690	0	0	100	0
	NT2RI20075070	0	0	100	0
35	NT2RI20077290	0	0	100	0
	NT2RI20077510	0	0	100	0
i	NT2R120077540	0	0	39.213	0
	NT2RI20078270	0	0	39.208	0
	NT2R120078790	0	0	9.741	0
40	NT2RI20078910	0	0	100	0
	NT2R120080500	0	0	100	0
	NT2R120081880	0	0	100	0
	NT2RI20082210	0	0	2.823	0
45	NT2R120083360	0	0	5.348	0
	NT2RI20085260	0	0	3.491	0
	NT2R120085980	0	0	2.71	0
	NT2RI20086560	0	0	13.947	0
	NT2RI20087140	0	0	50.642	0
50	NT2R120087490	0	0	1.932	0
	NT2RI20088010	0	0	100	0
	NT2RI20088120	0	0	15.273	0
	NT2RI20090830	0	0	24.964	0
55	NT2RI20091440	0	0	100	0
	NT2RI20092150	0	0	100	0
[	NT2RI20092890	0	0	100	0
	NTONG10001820	0	0	8.461	0

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	OGBBF20002770		0	39.883	
5	OCBBF20011240	Ö	o	7.83	0
3	PEBLM10001440	o	0	18.541	0
	PLACE50001130	o	ő	16.492	
	PLACE60014430	0	ő	3.227	0
	PROST20029600	Ö	0	40.276	o
10	PUAEN10000570	Ö	ő	8.916	o
	SALGL10001570	o	0	1.34	0
	SKMUS10000220	0	0	3.288	0
	SKMUS20004670	0	0	25.34	o
15	STOMA20002890	0	0	1.705	0
13	SYNOV10001280	0	0	4.538	0
	TEST120012690	0	0	3.275	0
	TESTI20023690	0	0	44.022	0
	TEST120028660	0	0	10.313	0
20	TEST120068720	0	0	21.478	0
	THYMU10000020	0	0	27.219	0
	THYMU10000830	0	0	8.95	0
	TRACH20002370	0	0	13.11	0
25	3NB6910001290	0	9.099	0	0
20	BRACE10000700	0	22.972	0	0
	BRACE20003320	0	14.937	0	0
	BRACE20015080	0	26.275	0	0
	BRACE20079020	0	59.759	0	0
30	BRACE20083800	0	4.248	0	0
	BRACE20092740	0	42.609	0	0
	FEBRA20008810	0	9.264	0	0
	FEBRA20017150	0	30.227	0	0
35	FEBRA20067930	0	58.409	0	0
	HHDPC20000550	0	14.432	0	0
	HSYRA20008280	0	7.137	0	0
	HSYRA20014760	0	5.313	0	0
	KIDNE10001450	0	19.263	0	0
40	KIDNE20000850	0	4.841	0	0
	KIDNE20002660	0	7.078	0	0
	KIDNE20003300	0	20.763	0	0
	KIDNE20033050	0	1.709	0	0
45	KIDNE20045340	0	17.723	0	0
	NT2RP60000080	0	100	0	0
	NT2RP60000170	0	100	0	0
	NT2RP60000320	0	100	0	0
	NT2RP60000390	0	100	0	0
50	NT2RP60000590 NT2RP60000860	0	100	0	0
		0	100	0	0
	NT2RP60001000	0	100	0	0
i	NT2RP60001230 NT2RP60001270	0	5. 146	0	0
55	NT2RP60001270 NT2RP70000410	0	100 100	0	0
	NT2RP70000410 NT2RP70000690	0	66.955	0	0
	NT2RP70000690 NT2RP70002590	0	31.56	0	0
	141211110002580	U	31.30		U

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	NT2RP70002710	ō	14.558		0
5	NT2RP70003640	0	100	0	0
	NT2RP70003910	0	100	0	0
	NT2RP70004250	0	100	0	0
	NT2RP70005790	0	100	0	0
	NT2RP70006240	0	100	0	0
10	NT2RP70008120	0	100	0	0
	NT2RP70009060	0	8.617	0	0
	NT2RP70012310	0	24.404	0	0
	NT2RP70013060	0	49.874	0	0
15	NT2RP70013350	0	30.221	0	0
	NT2RP70015910	0	22.4	0	0
	NT2RP70018560	0	100	0	0
	NT2RP70021510	0	49.439	0	0
	NT2RP70022430	0	33.36	0	0
20	NT2RP70023760	0	17.87	0	0
	NT2RP70024490	0	22.701	0	0
	NT2RP70024500	0	19.57	0	0
	NT2RP70025540	0	100	0	0
25	NT2RP70026190	0	9.482	0	0
	NT2RP70028290	0	49.972	0	0
	NT2RP70028410	0	100	0	0
	NT2RP70030500	0	100	0	0
	NT2RP70030910	0	20.809	0	0
30	NT2RP70033040	0	100	0	0
·	NT2RP70036290	0	9.965	0	0
	NT2RP70036470	0	24.999	0	0
	NT2RP70039600	0	15.306	0	0
35	NT2RP70040800	0	100	0	0
	NT2RP70042040	0	9.773	0	0
	NT2RP70042330	0	60.574	0	0
	NT2RP70042600	0	71.279	0	0
	NT2RP70043730	0	7.505	0	0
40	NT2RP70043960	0	100	0	0
	NT2RP70045410	0	24.679	0	0
	NT2RP70046560	0	100	0	0
	NT2RP70046870	0	100	0	0
45	NT2RP70047510	0	100	0	0
	NT2RP70047660	0	100	0	0
	NT2RP70047900	0	18.549	0	0
	NT2RP70049250	0	27.784	0	0
	NT2RP70049750	0	100	0	0
50	NT2RP70052050	0	64.358	0	0
	NT2RP70052190	0	100	0	0
	NT2RP70054680	0	100	0	0
	NT2RP70054930	0	49.38	0	0
55	NT2RP70055130	0	3.248	0	0
	NT2RP70055200	0	19.133 100	0	0
	NT2RP70061620 NT2RP70061880	0	20.642	0	0
L	N12NF/0001000	U	20.042	٠	

Table 4 (continued)

	Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
	NT2RP70062960	0	100		0
5	NT2RP70063040	0	100	0	0
	NT2RP70063740	0	100	0	0
	NT2RP70064080	0	100	0	0
	NT2RP70066210	0	100	0	0
	NT2RP70067010	0	100	0	0
10	NT2RP70069800	0	40.229	0	0
	NT2RP70071140	0	33.145	0	0
	NT2RP70071540	0	49.972	0	0
	NT2RP70072210	0	100	0	0
15	NT2RP70072520	0	100	0	0
	NT2RP70073590	0	100	0	0
	NT2RP70073810	0	100	0	0
	NT2RP70074060	0	100	0	0
	NT2RP70075040	0	100	0	0
20	NT2RP70076100	0	36.014	0	0
	NT2RP70076170	0	100	0	0
	NT2RP70076430	0	100	0	0
	NT2RP70079250	0	100	0	0
25	NT2RP70079300	0	71.279	0	0
	NT2RP70081330	0	100	0	0
	NT2RP70081370	0	26.129	0	0
	NT2RP70081420	0	100	0	0
	NT2RP70081440	0	100	0	0
30	NT2RP70081670	0	100	0	0
	NT2RP70083150	0	100	0	0
	NT2RP70084060	0	100	0	0
	NT2RP70084410	0	65.611	0	0
35	NT2RP70084870	0	48.444	0	0
	NT2RP70085500	0	100	0	0
	NT2RP70085570	0	9.069	0	0
	NT2RP70086230	0	100	0	0
	NT2RP70087200	0	100	0	0
40	NT2RP70088550	0	15.625	0	0
	NT2RP70090120	0	49.497	0	0
	NT2RP70090190	0	100	0	0
	NT2RP70091490	0	49.38	0	0
45	NT2RP70091680	0	100	0	0
	NT2RP70092150	0	100	0	0
	NT2RP70092360	0	100	0	0
	NT2RP70093630	0	100	0	0
	NT2RP70093700	0	100	0	0
50	NT2RP70093940	0	24.073	0	0
	NT2RP70093970	0	100	0	0
	NT2RP70094290	0	100	0	0
	NT2RP70094660	0	100	0	0
55	NT2RP70094810	0	58.409	0	0
	NT2RP70094980	0	44.133	0	0
	NT2RP70095020	0	100	0	0
	NT2RP70095070	0	100	0	0

Table 4 (continued)

Clone ID	NT2RM	NT2RP	NT2RI	NT2NE
NTONG10000980	ō	10.097	0	0
NTONG10002140	0	12.777	0	0
NTONG20002650	0	10.048	0	0
NTONG20016120	0	21.562	0	0
PEBLM20003950	0	8.711	0	0
PROST10005640	0	10.708	0	0
PROST20003250	0	24.163	0	0
SKNMC20000650	0	3.384	0	0
SKNSH10000860	0	23.605	0	0
SKNSH20003470	0	15.832	0	0
TESTI10000510	0	11.33	0	0
TEST110000960	0	51.106	0	0
TESTI20015110	0	65.524	0	0
TEST120074640	0	12.147	0	0
TRACH20004610	0	13.344	0	0

# Table 5

Clone ID	BEAST	TBAES
3NB6910001730	0	33.793
FCBBF10007600	0	75.606
KIDNE20033050	0	40.478
KIDNE20060300	0	69.585
NT2R120065530	0	81.65
NT2RP60000720	0	69.448
NT2RP70075370	0	57.062
TRACH20004200	0	94.946
LIVER10000670	68.212	0
LIVER10005420	78.818	0
LIVER20000370	73.799	0

## Table 6

Clone ID	CERVX	TCERX
BRACE10001590	0	57.778
HHDPC20000950	0	40.177
HSYRA20016210	0	10.84
NT2R120074980	0	46.086
3NB6920014330	69.325	0
NT2RI20087490	33.161	0
NT2RP60001090	80.827	0
PROST10002200	42.592	0
SKNMC20003220	58.42	0
STOMA20001210	49.81	0

Table 7

COLON TCOLN Clone ID BRACE20028610 95.142 BRACE20011170 78.541 0 BRACE20035940 95.04 0 IMR3220013320 60.529 0 26.798 NT2NE20053710 0

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Table 8

Clone ID	NESOP	TESOP
KIDNE20005740	0	54.924
MAMGL10000320	0	13.581
NESOP10000870	49.196	0
NT2RI20056470	69.766	0
NTONG20008000	78.683	0

Table 9

Clone ID	KIDNE	TKIDN
3NB6920002810	0	1.507
ADRGL10000020	0	12.08
BNGH420004740	0	3.392
BRACE10000200	0	33.823
BRACE10000420	0	4.476
BRACE10000730	0	35.7
BRACE10001590	0	3.051
BRACE20005650	0	55.211
BRACE20016730	0	41.8
BRACE20028120	0	21.571
BRACE20077980	0	4.39
BRACE20083800	0	15.501
BRACE20083850	0	25.281
BRAWH10001740	0	23
BRAWH20036930	0	11.581
BRAWH20064500	0	14.412
BRAWH20064930	0	40.792
CTONG20028030	0	15.825
FCBBF20015380	0	17.038
FEBRA20005360	0	7.956
FEBRA20007570	0	2.956
FEBRA20008740	0	4.47
FEBRA20012270	0	24.184
FEBRA20025250	0	20.688
HSYRA20002480	0	3.392
HSYRA20006400	0	4.833
HSYRA20008280	0	2.894
HSYRA20015740	0	9.842
HSYRA20016210	0	2.862
IMR3220009350	0	4.967
LIVER10001110	0	25.88

Table 9 (continued)

	Clone ID	KIDNE	TKIDN
	NT2NE20003920	0	3.741
5	NT2NE20007630	0	18.497
·	NT2NE20007870	0	6.961
	NT2RI20025410	0	21.344
	NT2RI20026540	0	4.662
	NT2RI20029580	0	15.887
10	NT2RI20033380	0	23.947
	NT2RI20033830	0	12.625
	NT2RI20051500	0	4.126
	NT2RI20058110	0	7.563
15	NT2RI20090650	0	3.609
.•	NT2RP60000720	0	3.567
	NT2RP70013350	0	9.191
	NT2RP70023790	0	2.777
	NT2RP70024490	0	27.614
20	NT2RP70028750	0	3.807
	NT2RP70029060	0	11.18
	NT2RP70036800	0	7.976
	NT2RP70075370	0	2.931
25	NT2RP70076100	0	14.603
	NTONG10000980	0	8.189
	NTONG10002460	0	4.695
	NTONG20015500	0	30.566
	OCBBF20002310	0	20.844
30	OCBBF20013070	0	18.625
	PEBLM20001470	0	8.936
	PEBLM20003950	0	5.298
	PLACE60021510	0	12.663
35	PLACE60040050	0	6.961
	PLACE60043970	0	7.802
	PROST20051430	0	37.542
	STOMA20001210	0	2.602
	STOMA20002570	0	14.983
40	STOMA20002890	0	1.528
	SYNOV20011440	0	4.944
	TESTI10000230	0	4.9
	TESTI20009700	0	18.005
45	TESTI20021490	0	8.135
	TESTI20032800	0	21.55
	TESTI20053960	0	9.979
	TESTI20080200	0	1.673
	TESTI20082400	0	2.876
50	BGGI120010970	4.336	0
!	BRACE20004210	3.583	0
	BRACE20005250	6.242	23.03
	BRACE20011170	3.303	0
55	BRACE20020910	19.111	0
	BRACE20080970	20.33	0
	BRAWH20000340	10.476	0
Į	BRAWH20006970	3.96	0

Table 9 (continued)

	Clone ID	KIDNE	TKIDN
	BRAWH20011660	5.897	
-	FCBBF20001950	65.363	0
5	FEBRA20043250	12,177	0
	HLUNG1000640	23.921	0
	IMR3220007420	2.375	0
	IMR3220014350	4.092	0
10	KIDNE10000080	22.13	0
	KIDNE10000280	100	0
	KIDNE10000500	15.868	0
	KIDNE10001040	100	0
45	KIDNE10001430	100	0
15	KIDNE10001450	19.052	0
	KIDNE10001520	100	0
	KIDNE20000410	100	0
	KIDNE20000510	100	0
20	KIDNE20000700	100	0
	KIDNE20000850	4.788	0
	KIDNE20001670	100	0
	KIDNE20001920	100	0
25	KIDNE20002440	37.565	0
25	KIDNE20002450	100	0
	KIDNE20002660	7	0
	KIDNE20003150	100	0
	KIDNE20003300	20.536	0
30	KIDNE20003490	64.026	5.625
	KIDNE20003750	100	0
	KIDNE20004030	5.561	0
	KIDNE20004220	35.77	0
35	KIDNE20004970	12.49	0
30	KIDNE20005130	100	0
	KIDNE20005170	81.524	0
	KIDNE20005190	100	0
	KIDNE20005740	2.3	0
40	KIDNE20031850	16.193	0
	KIDNE20033050	3.381	0
	KIDNE20033350	100	0
	KIDNE20033570	53.825	0
45	KIDNE20033730	100	0
	KIDNE20033770	100	0
	KIDNE20037520	100	0
	KIDNE20039410	100	0
	KIDNE20039940	43.968	0
50	KIDNE20040340	100	0
	KIDNE20040540	49.114	0
	KIDNE20040840	100	0
	KIDNE20042620	100	0
55	KIDNE20042940	100	0
	KIDNE20042950	100	0
	KIDNE20043440	100	0
Į	KIDNE20044110	7.51	0

Table 9 (continued)

	Clone ID	KIDNE	TKIDN
	KĪDNĒ20045200	100	<del>-</del>
5	KIDNE20045340	17.53	l o
•	KIDNE20045790	100	l o
	KIDNE20046810	100	o
	KIDNE20048280	100	0
	KIDNE20048640	34.264	0
10	KIDNE20048790	100	О
	KIDNE20049810	100	0
	KIDNE20050420	35.626	0
	KIDNE20052960	100	0
15	KIDNE20053360	58.142	0
	KIDNE20054000	49.697	0
	KIDNE20054770	100	0
	KIDNE20056290	100	0
	KIDNE20056760	16.262	0
20	KIDNE20059080	100	0
	KIDNE20059370	88.03	0
	KIDNE20060140	13.852	0
	KIDNE20060300	2.906	0
25	KIDNE20060530	100	0
-	KIDNE20060620	100	0
	KIDNE20061490	100	0
	KIDNE20062990	31.685	0
	KIDNE20063530	26.747	0
30	KIDNE20063760	100	0
	KIDNE20066520	70.185	0
	KIDNE20067600	100	0
	KIDNE20067750	8.487	0
35	KIDNE20068800	24.137	0
	KIDNE20070050	66.711	0
	KIDNE20070770	100	0
	KIDNE20071860	39.822	0
	KIDNE20073280	4.537	0
40	KIDNE20073520	8.83	3.62
	KIDNE20073560	100	0
	KIDNE20074220	100	0
	KIDNE20075690	100	0
45	KIDNE20078100	100	0
	KIDNE20078110	100	0
	LIVER10000790	15.673	0
	MAMGL10000320	1.138	0
	NB9N410000470	3.598	0
50	NT2NE20053710	1.127	0
	NT2RI20006710	2.454	0
	NT2RI20013420	2.015	0
	NT2RI20016570	23.435	0
55	NT2RI20018460	20.967	0
	NT2RI20025540	5.573	0
	NT2RI20040590	13.676	0
	NT2RI20065530	3.41	- · · · ·

Table 9 (continued)

Clone ID	KIDNE	TKIDN
NT2RI20087490	1.408	0
NT2RI20087910	2.824	0
NT2RP60000350	5.311	0
NT2RP60001230	5.09	o
NT2RP70043730	14.846	0
NT2RP70069860	10.745	26.431
NT2RP70074220	3.96	0
OCBBF20014940	49.164	0
PLACE60020840	2.658	0
PLACE60043120	3.992	9.82
PROST10003430	25.547	0
SKNSH20001510	20.208	0
SMINT10000160	38.817	15.914
SPLEN20000	66.711	0
SPLEN20001340	88.909	0
SPLEN20003570	31.635	0
STOMA10000470	17.849	0
TESTI10000700	25.214	0
TESTI20027070	14.795	0
TESTI20040310	2.58	0
TRACH10000300	11.119	0
TRACH20000790	4.534	11.153
TRACH20002500	35.282	0
TRACH20007800	5.605	0

Table 10

Clone ID	LIVER	TLIVE
FCBBF50002610	0	88.758
FEBRA20076220	0	53.946
KIDNE20033050	0	40.878
NT2NE20003840	0	70.165
KIDNE20062480	7.391	0
KIDNE20068800	60.015	0
LIVER10000580	100	0
LIVER10000670	31.788	0
LIVER10000790	77.941	0
LIVER10000990	100	0
LIVER10001040	100	0
LIVER10001110	52.319	0
LIVER10001750	100	0
LIVER10002300	66.114	0
LIVER10002780	100	0
LIVER10003030	100	0
LIVER10004330	100	0
LIVER10005420	13.604	0
LIVER20000330	100	0
LIVER20004160	33.27	0
LIVER20004460	100	0

Table 10 (continued)

Clone ID	LIVER	TLIVE
LĪVĒR20005150	100	ō-
NT2NE20002140	27.596	0
NT2RI20030510	18.459	0
NT2R120043040	50.8	0
NT2RI20090650	7.296	0
PROST10005640	26.335	0
PROST20032320	15.404	0
SALGL10001570	2.428	0
SMINT10000160	32.172	0
SPLEN20002420	83.286	0
TESTI20002530	26.418	0
TESTI20080200	3.383	0
THYMU10003590	7.302	0
TRACH20004720	6.356	0

Table 11

Clone ID	HLUNG	TLUNG
NT2RI20030110	0	94.571
BNGH410001980	16.113	0
BRACE10000420	7.831	0
BRACE10001150	1.339	0
BRACE20014770	28.126	o
BRACE20018550	25.65	0
BRAWH20006970	8.521	0
BRAWH20014610	7.03	77.801
FEBRA20008810	19.713	0
FEBRA20015840	53.019	0
FEBRA20044120	15.75	0
HHDPC20001490	25.611	0
HLUNG10000240	100	0
HLUNG10000300	100	0
HLUNG10000370	100	0
HLUNG10000640	51.466	0
HLUNG10000760	12.838	0
HLUNG10000990	100	0
HLUNG10001050	100	0
HLUNG10001100	100	0
HLUNG20000680	72.532	0
HLUNG20001160	100	0
HLUNG20001250	100	0
HLUNG20001420	79.349	0
HLUNG20001760	100	0
HLUNG20002550	100	0
HLUNG20003140	14.018	0
HLUNG20004120	42.131	0
HLUNG20004800	100	0
HLUNG20005010	5.302	0
HSYRA20014	12.578	0

Table 11 (continued)

Table 11 (continued)			
Clone ID	HLUNG	TLUNG	
KIDNE20002660	15.061	Ō	
KIDNE20033050	3.637	0	
NT2NE20014350	28.99	0	
NT2RI20016570	9.167	0	
NT2RI20026540	8.156	0	
NT2RI20051500	21.652	0	
NT2RI20064120	9.093	0	
NT2RI20083960	17.851	0	
NT2RI20085260	5.474	0	
NT2RI20087490	3.03	0	
NT2RP70009060	18.337	0	
NT2RP70011660	5.822	0	
NT2RP70029060	6.519	0	
NT2RP70055020	10.451	0	
NT2RP70074220	8.521	0	
NT2RP70076100	100 25.546	0	
NTONG10002460	16.426	0	
NTONG20008000	7.189	0	
PLACE60043120	8.589	0	
SKMUS20016340	15.317	0	
SKNMC20005930	13.727	0	
SMINT20000180	38.989	0	
SMINT20002390	51.283	0	
SMINT20002770	12.776	0	
SMINT20003960	10.489	0	
STOMA10000470	38.402	0	
STOMA20001880	52.43	0	
SYN0V2001374	23.798	0	
TESTI20036250	32.684	0	
TESTI20080200	2.927	0	
TRACH20004610	28.395	0	

Table 12

Clone ID	NOVAR	TOVAR
BRACE20011880	0	93.107
TESTI20030710	0	79.631
BRACE20076210	97.13	0
NT2RI20053680	78.467	0
SKMUS20008630	61.727	0
TESTI20005910	94.963	0
TESTI20040310	59.442	0

Table 13

Clone ID	STOMA	тѕтом
HSYRA20011030	0	60.206
NT2RI20013420	0	48.779
NT2RP70079750	0	74.336

Table 13 (continued)

Clone ID	STOMA	тѕтом
BRACE20003320	28.838	0
HEART20005060	8.996	0
HHDPC20000950	3.367	0
HLUNG20004120	38.225	0
HLUNG20005010	4.81	0
HSYRA20006400	23.013	0
KIDNE10000500	30.974	0
KIDNE20062480	2.901	0
NT2NE20053710	2.2	0
NT2NE20054410	65.251	0
NT2RI20015400	0.544	0
NT2RI20016570	4.159	0
NT2RI20064120	8.25	0
NT2RI20070840	15.758	0
NT2RI20071330	13.128	0
NT2RI20074980	3.862	0
NT2RI20077230	20.833	0
NT2RI20089420	17.218	0
NT2RP70000760	4.442	0
NT2RP70028750	3.021	0
PLACE60014430	9.182	0
PLACE60024190	54.046	0
SKNMC20000970	4.463	0
STOMA10000470	34.842	0
STOMA10000520	100	0
STOMA10001170	100	0
STOMA10001330	100	0
STOMA10001860	100	0
STOMA20000320	100	0
STOMA20000880	100	0
STOMA20001210	4.129	0
STOMA20001880	47.57	0
STOMA20002570	23.78	0
STOMA20002890	4.851	0
STOMA20003960	100	0
STOMA20004780	100	0
STOMA20004820	28.859	0
THYMU10003590	5.733	0

Table 14

Clone ID	UTERU	TUTER
NT2R120085260	0	60.829
3NB6920002810	1.339	0
BRACE10000420	15.908	0
BRACE20089990	28.795	0
BRACE20092120	61.611	0
BRAWH10001680	49.225	0
BRAWH20011410	14.576	0

Table 14 (continued)

	Clone ID	UTERU	TUTER
	BRAWH20011660	3.222	<sub>ō</sub>
_	FCBBF20005910	17.567	0
5	FCBBF50003910	4.011	0
		7.069	0
	FEBRA20005360 FEBRA20006800	81.993	0
			0
10	FEBRA20008800	29.932	_
	FEBRA20044120	7.999	0
	FEBRA20057520	14.823	0
	HEART20005060	5.036	0
	HHDPC20000950	1.885	0
15	HLUNG10000760	3.26	0
	HLUNG20003140	7.12	0
	HSYRA20014200	6.388	0
	HSYRA20014760	5.742	0
20	HSYRA20015800	36.126	0
20	IMR3210002420	7.465	0
	IMR3220002230	3.637	0
	IMR3220009350	4.412	0
·	IMR3220014350	4.472	0
25	IMR3220016000	0.788	0
	KIDNE20000850	5.232	0
	KIDNE20060140	15.135	0
	KIDNE20060300	3.176	0
	MAMGL10000350	1.122	0
30	NT2NE20035690	11.316	0
	NT2NE20053710	1.232	0
	NT2R110000270	61.432	0
	NT2R120000640	3.308	0
35	NT2R120002940	19.984	0
	NT2R120010910	15.542	0
	NT2R120013420	2.201	0
	NT2RI20016570	2.328	0
	NT2RI20033380	10.637	0
40	NT2RI20036950	5.07	0
	NT2RI20037510	2.677	0
	NT2RI20053350	2.517	0
	NT2RI20057230	2.613	0
45	NT2RI20058110	6.719	0
40	NT2RI20071480	25.67	0
	NT2RI20074980	4.324	0
	NT2RI20084810	20.5	0
	NT2RI20087490	1.539	0
50	NT2RI20087910	12.345	0
	NT2RP60000350	1.451	0
	NT2RP70032030	4.778	0
	NT2RP70043730	8.111	0
	NTONG10000980	7.275	0
55	NTONG10002460	4.171	0
	PLACE60014430	10.28	0
	PLACE60026680	15.19	0
	<u> </u>		

Table 14 (continued)

	Clone ID	UTERU	TUTER
	PLACE60043960	10.64	ō
	PLACE60044910	52.136	0
	PLACE60047380	52.136	o
	PROST10002200	1.976	o
	PROST10005260	12.466	0
	PROST20025910	51.788	0
	PROST20033380	16.15	0
	PUAEN10000570	14.201	0
	SALGL10001570	1.067	0
i	SKMUS10000140	23.507	0
	SKMUS20003430	35.091	0
	SKMUS20009540	9.414	0
	SKNMC10002510	6.618	0
	SKNMC20000970	2.498	0
	SKNSH10000860	25.511	0
	SMINT20002770	3.244	0
Ì	STOMA20002890	2.716	0
	SYNOV20011440	4.393	0
	TESTI10000230	8.707	0
	TESTI20018290	12.741	0
	TESTI20021490	14.455	0
	TESTI20080200	2.973	0
	TESTI20082400	2.555	0
	TRACH10000300	12.149	0
	TRACH20002370	20.883	0
	TRACH20007800	12.248	0
	TRACH20012890	4.662	0
	UTERU10000770	100	0
	UTERU10000960	50.58	0
	UTERU10001600	100	0
	UTERU10001920	100	0
	UTERU20000470	100	0
	UTERU20003380	35.158	0
	UTERU2O0039	100	0
	UTERU20004850	100	0
	UTERU20005410	33.583	0
	UTERU20005690	50.58	0

Table 15

	Clone ID	NTONG	CTONG
Ī	3NB6910001160	0	6.048
	3NB6910001290	0	3.009
	3NB6910001730	0	0.944
	BNGH420004740	0	3.688
1	BRACE20008850	0	15.357
-	BRACE20020910	0	12.778
	BRACE20074010	0	5.637
L	BRAWH20014840	0	5.251

Table 15 (continued)

	Clone ID	NTONG	CTONG
	Clone 1D   BRAWH20089560		21.778
-	CTONG20003030	0	100
5	CTONG20005890	0	39.66
	CTONG20003890 CTONG20007710	0	100
	CTONG20007710	0	18.957
	CTONG20000270	0	10.337
10	CTONG20011390 CTONG20013200	0	19.93
	CTONG20013200 CTONG20013660	0	19.93
	CTONG20015330	0	100
	CTONG20013330 CTONG20018200	0	100
_	CTONG20018200 CTONG20019110	0	48.152
15	CTONG20019110 CTONG20019550	0	100
	CTONG20019330 CTONG20020730	0	25.035
	CTONG20020730 CTONG20021430	0	100
	CTONG20021430 CTONG20024180	0	100
20	CTONG20024180 CTONG20024530	0	23.734
	CTONG20024550	0	57.263
	CTONG20027210	0	100
	CTONG20027210 CTONG20028030	0	8.603
	CTONG20028160	0	100
25	CTONG20028200	0	55.786
	CTONG20029650	0	100
	GTONG20023830	0	. 100
	CTONG20037020	0	100
30	CTONG20055530	0	38.023
	CTONG20064490	0	24.327
	FEBRA20003770	0	22.646
	FEBRA20004520	0	19.228
	FEBRA20007400	0	4.377
35	FEBRA20007570	0	1.607
	FEBRA20012940	0	7.503
	FEBRA20021940	0	1.128
	FEBRA20044120	0	4.895
40	HCASM10001150	0	1.394
	HHDPC20004560	0	18.986
	HLUNG20003140	0	4.356
	HSYRA20002480	0	3.688
45	IMR3220009350	0	2.7
45	IMR3220012180	0	3.684
	KIDNE20000850	0	1.601
	KIDNE20002660	0	9.361
	KIDNE20004220	0	23.916
50	KIDNE20005740	0	1.538
	KIDNE20056760	0	21.746
	KIDNE20060140	0	9.261
	KIDNE20062480	0	2.981
55	MESAN20000920	0	19.727
55	MESAN20003370	0	17.82
	NHNPC20002060	0	4.429
	NT2NE10001850	0	39.142

Table 15 (continued)

	Clone ID	NTONG	CTONG
	NT2NE20000560	0	8.845
5	NT2NE20002140	0	7.421
	NT2NE20003270	0	27.905
	NT2NE20003840	0	1.94
	NT2NE20014350	0	4.505
	NT2NE20053710	0	3.014
10	NT2RI20006690	0	12.129
	NT2RI20006710	0	1.64
	NT2RI20016570	0	1.424
	NT2RI20018660	0	49.358
15	NT2R120025300	0	49.872
	NT2R120025410	0	11.603
	NT2R120030190	0	27.593
	NT2R120030510	0	9.928
	NT2RI20036950	0	6.205
20	NT2RI20046060	0	12.778
	NT2RI20053350	0	4.621
	NT2RI20067350	0	27.381
	NT2R120075720	0	8.573
25	NT2RI20078790	0	3.165
	NT2RI20083960	0	5.548
	NT2RI20087140	0	49.358
	NT2RI20094060	0	8.828
	NT2RP60000350	0	5.327
30	NT2RP60001230	0	6.806
	NT2RP70000760	0	12.173
	NT2RP70004770	0	36.51
	NT2RP70009060	0	5.699
35	NT2RP70011660	0	5.428
	NT2RP70023760	0	11.817
	NT2RP70023790	0	3.02
	NT2RP70024500	0	12.942
	NT2RP70026190	0	12.541
40	NT2RP70029820	0	10.391
	NT2RP70036470	0	33.064
	NT2RP70043730	0	4.963
	NT2RP70061880	0	27.302
45	NT2RP70071770	0	18.778
45	NT2RP70076100	0	7.939
	NT2RP70079750	0	4.105
	NT2RP70084870	0	32.036
	NT2RP70093730	0	19.806
50	OCBBF20013070	0	5.063
	PEBLM20003950	0	5.761
	PLACE60037450	0	33.178
	PLACE60043120	0	2.669
	PROST10003	0	34.162
55	PROST10005260	0	7.628
	PROST2003232	0	8.285
	PROST2003302	0	6.218
Ę		•	

Table 15 (continued)

	Clone ID	NTONG	CTONG
	PROST20056040	<del>-</del> ō	<u>2</u> 9.772
5	SKNMC10002510	0	8.098
	SKNMC20000650	o	4.476
	SKNMC20010570	0	4.712
	SKNSH20003470	0	10.47
	SMINT20000180	0	24.233
10	SYNOV20013740	o	7.396
	TESTI10000230	0	7.991
	TESTI10001680	o	8.412
	TESTI20007840	o	17.514
15	TESTI20021490	o	4.422
7.5	TESTI20022230	o	62.139
	TESTI20023690	0	42.906
	TESTI20030050	0	1.535
	TESTI20042950	0	76.649
20	TESTI20068720	0	10.467
	TESTI20080200	0	0.91
	TRACH20012890	0	1,426
	BRACE20006980	55.471	o
25	BRACE20092740	22.273	o
20	BRAWH20006970	8.372	o
	FCBBF10007600	6.676	О
	FEBRA20062700	19.42	6.142
	IMR3220016000	3.049	0.482
30	KIDNE20073280	9.592	3.034
	MAMGL10000350	2.171	О
	NT2NE20035690	21.893	o
	NT2RI20056470	23.487	5.448
25	NT2RI20058110	12.999	o
35	NT2RI20084810	13.22	О
	NT2R120085260	5.378	o
	NT2RP70015910	46.836	14.813
	NT2RP70036290	20.836	59.311
40	NT2RP70036320	18.528	46.879
	NT2RP70074220	8.372	О
	NT2RP70075370	5.038	0
	NTONG10000330	100	0
45	NTONG10000520	44.434	0
70	NTONG10001230	100	0
	NTONG10001300	100	0
	NTONG10001820	39.112	0
	NTONG10002140	80.147	0
50	NTONG10002460	8.07	0
	NTONG10002570	100	0
	NTONG10002640	67.153	0
	NTONG20002650	21.01	6.645
E E	NTONG20003340	27.701	0
55	NTONG20003630	100	0
	NTONG20004920	100	0
	NTONG20005830	100	0

Table 15 (continued)

Clone ID	NTONG	CTONG
NTONG20008000	14.128	ō
NTONG20008780	100	0
NTONG20009660	100	0
NTONG20009850	100	0
NTONG20011370	100	0
NTONG20012220	100	0
NTONG20014280	76.302	0
NTONG20015500	52.537	0
NTONG20016120	45.084	0
OCBBF20011240	24.128	0
OCBBF20015860	50.483	0
PROST10002200	22.942	1.209
SKMUS20016340	15.05	4.76
SKNMC20000970	4.833	1.529
STOMA20004820	31.253	9.885
SYNOV10001280	13.986	0
SYNOV20011440	8.499	0
THYMU10000830	27.581	0
TRACH20000790	19.169	0
TRACH20009260	30.323	9.59

Table 16

					<u> </u>	<u> </u>	51	5 k	0	$\overline{}$	$\overline{a}$	0	0	$\overline{}$	Ö	ō	0		0		Ö	o	O	o	ol	oī	0		ol	٥I	0	ol	O.	<u> </u>		57
5	BRTHA														)						)															
10	BRSTN	0	0		18.412	17.335	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	٥	٥	0	0	٥	0		1	8.171	0	0	0	0	٦
	BRSSNI	ō	0	0	19.055	4.485		2.902	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	٦	0	0	ı	8.456	0	0	5	0	5
15	BRHTP	0	5.733		4.854	••	ľ	10.129	0	0	0	0	0	0	0	0	0	0	0	0		6. 739	0	0		37.626	• • •	0	0	- 1	2.693	0	0	5	5	5
20	BRCOC			26.699			ľ	15.139	0	0	0	0	0	0	0	19.003	0		10.646	0	0	0	0	0	0	0	0	0	0		12.073	0	0	٥	0	5
	BRCAN	Б	5.549	17.29	9.396	11.059	- 1	9.804	=	0	0	0	0	0	0	36.92	0	0	0	0	0	6.522	0	0	0	0	0	0	0		2.606	0	0	0	5	5
25	BRAWH	62.3411	28.509		æ		ဗ္ဗ	33		34.	34.637		100		50.775	21.		11.	11.808		100	11.				62.	32.7		5.888	1 1	8.927	9	100		18.383	2
30	BRAMY	Ю	16.608	0	2.344	8.275	0	0	0	0_	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3.43	0	0	0	0	0	0	ā
	BRALZ	0	8.739	0		8.709	0	15.441	0	0	0	0	0	0	0	0	0	0	0	0	P	0	0	0	0	0	0	0	0		8.209	0	0	0	0	ੂ
35	BRACE	37.6591	17.222	8.944	7.291	2.86	24.099	0	0	0	ō	0	0	0	0	0	Q	0	0	0	0	0	0	0	P	10	0	0	0	0	0	0	0	. 0	0	5
40	OCBBF	0	6	0	0	0	0	0	0	0	0	0	0	ō	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FEBRAI	6	0	0	0	0	0	0	0	P	0	0	0	0	6	0	0	0	0	0	0	 	0	0	٦	0	0	0	0	0	0	0	0	0	0	0
45	FCBBF	0	6	0	0	0	0	0	0	ō	0	0	0	0	6	P	6	0	0	6	P	0	0	0	6	0	0	0	0	0	0	0	0	0	0	<u></u>
50		28960	74010	77080	77980	83800	88570	000010	00000	0/000	00370	00940	01300	01640	01680	01740	01800	00340	00340	00480	00030	01770	02480	03230	04430	04760	05030	05540	06330	06510	0,690	09980	108920	09010	109440	09840
55	Clone ID	BRACE 20028960	BRACE 2007 4010	BRACE20077080	BRACE20077980	BRACE20083800	BRACE20088570	BRAWH 100000 10	BRAWH10000020	BRAWH100000070	BRAWH10000370	BRAWH 10000940	BRAWH10001300	BRAWH10001640	BRAWH10001680	BRAWH 1 000 1 7 40	BRAWH10001800	BRAWH20000340	BRAWH20000340	BRAWH20000480	BRAWH20000930	BRAWH20001770	BRAWH20002480	BRAWH20003230	BRAWH20004430	BRAWH20004760	BRAWH20005030	BRAWH20005540	BRAWH20006330	BRAWH20006510	BRAWH20006970	BRAWH20008660	BRAWH20008920	BRAWH20009010	BRAWH20009440	BRAWH20009840

Table 17

5	0	0	0	0			9.34			5		0	0	0	0	0	0	0	0	0	0	0	0	0	٥	0		46.286	0	0	0	0	0		0	5
10	0		3.042	0	1.00	5	=	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		15.282	0	0	0	0	0	0	0	0	5	1	8. 171
15	0	0	0	0	0	٥	0	0		٦	0	7	9	0	0	0	0	0	0	0	0	0	0	0	J	2.556	0	0	0	ľ	8.049	0	0		- [	8.456
13	0	0	0		14.505	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	- 1	24.222	0	0	0	0	0	1.11	2.693
20	0	0	0		10.84	0	0	9	0	0	٥	0	0	0	0	0	0	0	0	0	0		29.733	0	0	0	0	0	0		3.831	0	0	0	0	12.073
25	0	0	0	0	7.02	0	0	0	0	0		36.864	١.	21.826	0		26.686	0	0	0	0	0	0	0	1.393	0	0	0	0	0	2.481	0		20.542		2.606
	69.012		3.323		24.046	1	3.683	100	100	100	9	63. 136	Ė	37.381	100	i i	45.705	100	-	36. 711	100	100	32.978	100		2.698		9.125		1.157	•		22.915	35, 182	•	8.927
30	0	0	1.936	0	7.004	0	2.145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		42.005	0	0	0	0
35	0	0	0	0	Ξ.																				9	0					0					8
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40	0	0	0		0																									·		1				
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0		0	0	0	0			0	0	0	0	0	0	0		0	0	0
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	011030	0011290	091100	0017030	BRAWH20014180	BRAWH20014380	014610	BRAWH20015030	BRAWH20036890	BRAWH20038320	0047310	BRAWH20059980	0060440	0064930	3066220	BRAWH20069600	BRAWH20069890	BRAWH20074050	0509700	098690	3092270	BRAWH20092610.	BRAWH20093600	BRAWH20094850	MR3220013170	KIDNE20000850	KIDNE20004220	KIDNE20031850	KYDNE20050420	MAMGL 10000350	NT2NE20001740	NT2R120042840	72R120086560	T2RP70002590	2RP70065270	72RP 70074220
55	BRAWH200	BRAWH20011290	BRAWH200	BRAWH20012030	BRAWH2(	BRAWH2(	BRAWH20014610	BRAWH2(	BRAWHZ	BRAWHZ	BRAWH2004731(	<b>BRAWH2</b> (	BRAWH20060440	BRAWH20064930	BRAWH20066220	<b>BRAWH2</b> (	BRAWH 20	BRAWHZC	BRAWH20076050	BRAWH20089560	BRAWH20092270	BRAWH2(	<b>BRAWH2</b> (	BRAINH 20	TMR322(	KIDNEZ	KIDNE 2	KIDNE2(	KYDNEZ	MAMGL 1	NT2NE2	NTZRIZ	NTZRIZ	NT2RP7	NT2RP7(	NT2RP 70

Table 18

5	0	0	0	0	0	0.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	6.362	0	0	0	0		38.006	0	0	0	1.456	ı	30.792		5.451	0	0	0	0	0		3.12	0	0	0	0	10	0	0	0	0	0	0	0	0	9
	0	0	0	0	0			0	0	0	0			0	· 0 1	0	0	0	0	0	0	0 4	0		6.664	0	0	0	0	0	0	0	0	0	61.06	0
15	_	9.88	0	0	0	0	0	0	0	0	0.96	0.833	0	0	0	0	0	0	0	0	0	28.42	0		8.487	0	0	0	0	0	0	0	0	0	0	0
20	6.267	0	0	0	10	0	18.719		0	0	0	1.245	0	0	0		29.495	0	0	0	0	0	0		6.342	0	0	0		26.664	0	0	0	0	0	0
25	0	0	0	0	0	0						-1													8.21	0	4.7	4.77						0		
	1 -1	8.189	35.969	24.247	22.035	44.17	20.762	6.317	19.	က																1		0	0	0	0	0	0	0	0	0
30		19.08	0		0			3.	Ť :		0	1	Ì	15.								0					14.7	14.73						0		
35											2.	ĺ					15.					0 0			9								00 00	51.		9 3.424
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40	0	0	0	0	0	0	0	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	- 0	0	10	0	0	0	0
45	0	[0	0	0	0	0	0	0	0	0	0	0		0	0	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
	0	0	0	0	0	0	0	0	. 0	0	0	0	0	0	0			-0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	VTONG10001820	PEBLM20001470	PLACE60032040	SKMUS10000140	SMINT20005450	EST120004350	FST120008830	RACH20007800	RACH20016070	JMVEN20001330	3NB6910001730	3NB6920002810	ADRGL 20000740	BNGH410001370	BNGH410001980	BRACE 10000200	BRACE10000730	BRACE10000930	BRACE20000770	BRACE20001000	BRACE20001410	BRACE20002800	BRACE20003320	BRACE20005050	BRACE20005250	BRACE20005450	<b>BRACE20005650</b>	BRACE20005650	BRACE20005770	BRACE20006980	BRACE20007180	BRACE20008850	BRACE20009880	BRACE20010650	BRACE20010700	BRACE20011170
55	NIO	PEBI	PLA	SKH	SMI	TES	TES	TRA	TRA(	ĭ M D	3NB(	3NB(	ADR	BNG	BNC	BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA	<b>BRA</b> (	BRA	<b>BRA</b> (	BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA

Table 19

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10	000000000000000000000000000000000000000	Ī
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20	000000000000000000000000000000000000000	
25		0
30	49.090000000000000000000000000000000000	
35		821[ (
40	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Ш
45		0
50		
50	BRACE 2001 1430 BRACE 2001 1430 BRACE 2001 1430 BRACE 2001 1340 BRACE 2001 1350 BRACE 2001 1350 BRACE 2001 1430 BRACE 2001 1430 BRACE 2001 1580 BRACE 2001 1580 BRACE 2001 1630 BRACE 2001 1630 BRACE 2002 1510 BRACE 2002 1510	BRACE20027550
55		<u> </u>

Table 20

	rab		-	20	,									•																						
5	6	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0		. 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	5
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			0	8.72	)					•	)																)									_
15	0	0	0	0	0	0	0	ō	0	0	0	0	0	0	þ	0	0	ō	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	<del>-</del>
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20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	.658	<u></u>
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25	0	0	0	Lo	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	10	0	0	0	0	9	0	<u></u>
30	0	6	8	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	.093	0	0	0	0	0	0	0	0	0	8	ਠ
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40	0	0	0	0	0	ō	0	0	0	0	0	0	0	0	0	٦	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	6	L						0		(C	_	lc	C														0								0	2
										)		)	, Y															)			)					
45	6	0	0	6	0	0	0	0	0	0	0	0	0	0	6	0	o	0	0	0	0	0	0	0	0	0	0	0	0	0	_ 0	0	0	0	0	5
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	7.200	00279	00279	00281	00286	00307	00328	00331	00339	00343	00351	00359	<b>00713</b>	00715	80719	02700	00723	00728	00744	00750	00752	00753	00756	00762	00764	99766	00768	97,700	00776	00776	<b>00778</b>	00786	00790	00795	90809	00811
	BRACE20027720	BRACE20027920	BRACE20027960	BRACE20028120	BRACE20028600	BRACE20030780	BRACE20032850	BRACE20033190	BRACE20033980	BRACE20034310	<b>PACE2</b>	BRACE20035940	BRACE20071380	BRACE20071530	BRACE20071970	BRACE20072010	BRACE20072320	BRACE20072810	BRACE20074470	BRACE20075020	BRACE20075270	<b>BRACE20075380</b>	BRACE20075630	BRACE20076210	BRACE20076460	BRACE20076630	BRACE20076850	BRACE20077610	BRACE20077640	BRACE20077670	BRACE20077840	BRACE20078680	BRACE20079020	BRACE20079530	BRACE20080970	BRACE20081140
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10	21.205 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	14.647 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
15	31.829000000000000000000000000000000000000	2.512 2.512 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 14.294 12.063 4.348 5.491 5.491 11.97 0 0 3.085 0
20	500	36.97
25	49. 28 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
		000000000000000
30	49.000000000000000000000000000000000000	6. 902 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
35	000000000000000000000000000000000000000	0.637 0.637
	13.995 100 100 17.942 100 100 100 100 100 100 100 100 100 10	0000000000000
40	000000000000000000000000000000000000000	000000000000
45		000000000000
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50	83850 84430 84430 86530 86530 87540 87540 87540 89500 91120 93110 93110 94370 94370	54490 00950 01150 04560 04560 07566 03020 03300 04970 059370 06970 06970 06970 06970
55	BRACE20083850 BRACE2008430 BRACE20086530 BRACE20086530 BRACE20086530 BRACE20080500 BRACE2009140 BRACE20093110 BRACE20093110 BRACE20093110 CTONG20013200 CTONG20013200	CTONG2005490 HHDPC2000950 HHDPC2000950 HHDPC20001150 HSYRA20001150 HSYRA20000380 IMR3210002800 IMR3220003300 IMR3220003300 KTONE20003370 KTONE20059370 KTONE20059370 KTONE20059370 KTONE20059370 KTONE20059370 KTONE20059370

5																																				
	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00	0	0		33.576		5.656	0	0	0	0	0		50.521	0	7
10	0	0	0	0	0		0	0	0		27.171	0	0	0	0	0	0	0	0	0	10	90.09	0	0	0	0	0		22.966	0	0	0	0	0	0	0
15	0	0	1	50.666		2.619	0	0	0	0	0	0	0	0	0	0	0	0.791	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.978	5		21.973
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.	27.843	0	0	0	0	ō	0	1.73	0	11.251	0	0	10.161	0	26.32	6.997
20	0	0	0	0	0	0	0	0	0	0	0		7.544	0	0	0	0	0	0	0	0	0	8.203	0	0	0	0	0	0	0	l	50.126	22.78	0	0	5
25	0	0	6	0	0		9.103		24.543	0	0	0	0	0	0	0	0		34.563	0	0	0	0	0		20.831	0	0	0	5.445	0	0	19.67	5	0	<b>a</b>
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ō	0	5
30	0	38.711	0	0	38.711	1.611		21.469	0	37.52	0	0				48.905	16.	- 0	0	0 .	0	0	0	0	7.713	0	0		14.618		23.893	0	0	5	0	0
35	0		40.251		0								0	14.174		1 1	25.							60.17							0	0	0	0	0	5
	30.348	0	0	0	0	0	0	ō	0	0_		2.704	0	Н	6.506	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5.633	0	0	0	0	0	0
40	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0		0	0	0	0	0	0
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50	029200	02170	311560	013640	016970	006710	09740	2R120022430	025300	)28020	2R120029260	)30110	330510	)40590	)46060	)49840	)49850·	)56470	027090	)62100	)67350	068250	70840	096070	711480	772540	074980	)85260	)88120	099060	)90830	)13060	)13350	323760	324500	330910
55	MESAN20002670	NT2NE200051-70	NT2NE20011560	NT2NE20013640	NT2NE20016970	NT2R120006710	NT2R120009740	NT2R120	NT2R120025300	NT2R120028020	NT2R120	NT2R120030110	NT2R120030510	NT2R120040590	NT2R120046060	NT2R120049840	NT2R120049850	NT2R120056470	NT2R120060720	NT2R120062100	NT2R120067350	NT2R120068250	NT2R120070840	NT2R120070960	NT2R120071480	NT2R120072540	NT2R120074980	NT2R120085260	NT2R120088120	NT2R120090660	NT2R120090830	NT2RP7001306(	NT2RP70013350	NT2RP70023760	NT2RP70024500	NT2RP70030910

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15		5.959		0	0	0		3.241	0	0	0	0	0	0	0	16.897		3.198	1.807	0	0	0	0	0	0	0		8.424		13.599	0	0	0	0	0	0	5
20			25.125	0	0	0	16.656	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		12.892	0	0		6.295	0	0	0	1	9.741	0	0	0	0
25		0		39.426	0	0	0		7.814	0	0	0	0	0	0	0	0	0	0	0	0	0		8.349	0	0	0		9.726	0	0	0	6.308	0	0	5.67	0
		0				0												0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30		5.755	0	0	0	0	0	0	0	2.016	0	0	0	19.45	23.698	0	23.344	0		18.179	•	31.763	0	0	0		<u>o</u> i	4.							0	0	17.838
35	,	0	0		50.62	0							50.											13.1	0	=		0	0	0	0	0		33.898	0	0	0
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50		2RP70036320	1036470	042330	054930	0064900	071140	075370	001970	079750	1081370	1090120	1091490	093730	014280	015500	000340	014430	020840	1024190	026920	030380	038500	043970	002720	1000530	021620	032320	033380	062600	000000	1001570	000220	001170	002710	009540	011290
55		NT2RP7C	NT2RP70036470	NT2RP70042330	NT2RP70054930	NT2RP70064900	NT2RP70071140	NT2RP70075370	NT2RP70076100	NT2RP70079750	NT2RP70081370	NT2RP70090120	NT2RP70091490	NT2RP70093730	NTONG20014280	NTONG20015500	PEBLM10000340	PLACE60014430	PLACE60020840	PLACE60024190	PLACE60026920	PLACE60030380	PLACE60038500	PLACE60043970	PROST10002720	PROST20000530	PROST20021620	PROST20032320	PROST20033380	PR0ST20062600	SALGL 10000050	SALGL 10001570	SKMUS10000220	SKMUS20001170	SKMUS20002710	SKMUS20009540	SKMUS20011290

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20	00	7.23		00													0	0	5	0 2 66	9	10	0	0	0	0	17.687	0
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30	00	4.105	6	89	00		П	1	9	ထ		21.276					0	0	۲	0.000	56	0	0	0	2.847	0	0	ਠ
35	00	7.379	00	00												36.3		5	5	200	50	0	0	0	0	0	0	ਠ
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	00		00			0					9	or			0	0	0		٥١٥				0	48.889	2.298	1.899	9.224	10.127
50	015010 015430	002240	0015030	001000	001970	002570	002910	100011440	10000700	10001680	005200	TEST 120015110	EST120018690	018980	EST120024670	EST120032800	033250	036250	20136910	HIMMINGOODS	003290	096000	TERU20005690	000650	010970	004210	02020	020910
55	SKMUS20015010 SKMUS20015430	SKMUS20016340 SKNMC20002240	SKNMC20015030 SknsH20001510	SMINT10001000 SMINT20002390	SPLEN20001970	ST0MA20002570	SYNOV20002910	SYNOV 2001 1440 TEXT 110000510	TESTITO	TEST 110	TEST120005200	TEST 120 TEST 120	TEST 120	TEST120018980	TEST120	TEST120	TEST120033250	1	TEST 120136910		THYMII 10003590	UTERU10000960	UTERUZO	ADRGL 10000650	BGG 1120010970	BRACE20004210	BRACE 20020500	BRACE20020910

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45	0	0		9.176	0	0	0	=	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		66.829	0	0	0	0	0	0	0	0	0	0
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25	0	0	0	0 5.	0	0	0	918	0	0	0	0	0	0	0	0	559	0	0	0	0	0	0	0	0	0	0	0	0		0 18.		52.	0	0	0
30	0	0	0	0	0	0		0 68.0	0	0	0	0	0	0			0 3.5	0	0	0	0	0	0	0	0	0	.  0	0	0	0	33	0	0	0	0	0
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	71.986	2.732	56.232	11.704	16.732	27.714	$\sim$	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.804	0	0	0	0	0	0	0
40	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	8.0141	2.126	3.768	9.11	3.023	1.571	3.581	1.981	8.811	4.214	0.136	100	100	100	100	100	8.367	100	100	4.637	1001	100	100	8.519	100	3.171	100	100	3.045	100	4.958	100	4.606	100	100	100
50							Н				H	-	Н	Н	-			Η	Н	Н				Н	Н			Н	H	Н	$\vdash$		Н		H	H
	BRACE20024780	BRACE20028610	BRACE20031100	BRACE20035270	BRACE20035390	BRACE20071740	BRACE20077270	BRAWH20001090	CTONG20024530	CTONG20028200	CTONG20055530	FCBBF10005980	-CBBF 10006180	-CBBF 10006870	FCBBF10006910	FCBBF10007320	FCBBF10007600	FCBBF20000940	FCBBF20001050	3F200019	CBBF20002320	CBBF20002760	CBBF20005760	CBBF20005910	FCBBF20006770	FCBBF20007330	FCBBF20008080	-CBBF20008150	FCBBF20009400	FCBBF20009510	FCBBF20012110	FCBBF20012990	-CBBF20014800	CBBF20016720	FCBBF20017180	FCBBF20017200
55	IBRAC	BRAC	BRAC	BRAC	BRAC	BRAC	BRAC	BRAH	CTO)	CTO	CT0	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	<b>EB</b>	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCBB	FCB

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10	0	0	0	0	6.722	10	0	0	0	0	0	0	5.685	2.626	0	0	0	13.803	0	0	0	0	0	0	0	0	0	0	0	0	14.854	0	0	0	0	5
15	0	10	0	0	0	2.631	0	0	0	0	0	0	0	0	4.947	0	0	0	0	0	0	•	6.552	0	. 764	0	0	0	. 503	0	0		3.846	0	0	9
	0	417	0	0	0	676	438	0	0	0	0	0	o	0	-	Q	900	986	0	0	0	- 1	-	0	0	0	0	0	0	0	79		-	o	84	0
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25	0	0	0	0	8.576		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.853	0	0	0	4.267	0	0	5
	0	0	0	0	7.344	2.778	0	0	0	0	0	0	0	0	0	0	6.635	5.081	3.255	0	0	0	7.474	0	1.863	0	0	0	1.587	0	0	0	7.309	5.475	0	5
30	О	369	0	0	278	0	183	0	0	0	0	0	0	0	. 596	0	1 1			0	8.9	0	0	0	0	0	.037]	0	0	0	454	0	0	0	0	5
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35						5.1				7.3																										
	0	0	8.105	0	0	0	0	0		1.617	0	0	3.752	3.466	9.532	٥	8.016	٥	0	0	0	٥	0		0	0	0	0	0	0	0		0	0		٦
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	5
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45	100	05]	180	19/	90	90	186	2.5	[97	29}	1	75	92	161	711	52	16/	16	35	39	88	37	191	59	9/	72	17]	82	93	37	63	54	73	74	02	[3]
	100	1.1	6.3	12.6	6.9	1.30	5.7	5.	20.27	1.2	1.9	5.0	2.6	1.3	3	25.8	4.6	7.0	15.63	11.5	5.4	7.5	8.2		0.8	24.2	6.5	43.5	1.4	1.5	7.0	51.1	6.8	2.5	1.7	10.8
50	)2820	01150	)1490	30640	3140	5010	1350	4760	6310	7420	9730	)9840	12180	13320	)2660	96760	73520	)4160	30920	5300	35690	0910	16210	6570	33040	33440	58110	92060	37490	. 02/00	2710	12310	36800	55020	55130	21880
55	FCBBF40002820	HCASH10001150	HHDPC20001490	HLUNG10000640	HL UNG20003140	HLUNG20005010	HSYRA20001350	HSYRA20014760	HSYRA20016310	XMR3220007420	IMR3220009730	MR3220009840	1MR3220012180	MR3220013320	KIONE20002660	K I DNE 20056760	KIDNE20073520	L IVER20004160	MESAN20000920	NT2NE20015300	NT2NE20035690	NT2R120010910	NT2R120016210	NT2R120016570	NT2R120033040	NT2R120033440	NT2R120058110	NT2R120065060	NT2R120087490	NT2RP60000720	NT2RP70002710	NT2RP70012310	NT2RP70036800	NT2RP70055020	NT2RP70055130	NT2RP70061880
55	12	HC	圉	H	HE	H	HS	HS	HS	IH	割	ΨI	IH	E	E	Ž	KI		Ή	Ξ	Z	١	Ξ	١	Ξ	Ξ	NT.	Ξ	N	NT.	Ξ	N.	N	N	뉟	Ξ

Table 27

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45																			2.2	3.0		2.6					25.			10:0						
15	0	3.749	0	0	0	0	0	0	0	0	0	0.845		27.957	0	0	0	0	0		10.911	0		24.62	m.	0	0	7.65	0	0		33.848	0	0	48.57	ਰ
20	0	0	0	0	0	0	0	0	0	0	0	2.525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	5
	0	0	0	7.508	0	0	0	0	0	0	0	4.906	0	0	0	0	0	0	0	0	0	1.639	3. 265	0	0	6.933	0	0	0	0	7.711	0	0	0	0	히
25	6	0	0	828	0	0	0	0	0	0	0	- 10	10	0	0	0	32	0	0	0	187	908	0	0	0	0	0	0	035	313	327	101	0	0	0	=
				12.													12.				18	۳,							15	10	25	37				
30	0	0	0	0	0	0	0	0	0	0	0	2.448	0	0	0	0	0	7.582	0.68	0	0	0.409	0	0	0	0	0	7.388	0	0	0	0	0	0	0	٥
	6	0	0	0	0	0	8.48	0	0	0	0	3.864	0	0	0	0	0	0	. 073	0	0	7.743	5.142	0	0			0	0	0	0	0	0	0	0	5
35	6	0	0	0	0	0	0	0	0	0	0		0	0	75	0	0	0	15	. 854	78	211		31	39		16 24	83	47	22	0	0	0	0	0	9
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40	F	0	0	0	0	0	0	0	0	0	0	o	0	0	0	0	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	236	376	553	396	786	70.	348	585	381	101	604	779	136	947	848	001	43	32
45		١.																	2.	2.	11.	0	-	36	61.	<u>-</u> -	34	œi	တ	ဖ	œ	Ξ	2	١	51	
	34.389	2.922	0.959	6.046	34.251	16.176	9.448	1.578	3.771	9.559	1.503	0.658	<u>5.862</u>	21.79	32.749	6.367	1.784	6.119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	P	0	0	
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20	0	0	0	0	0	0	7.7		0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
. 25	0	0	0	0	0	0	1.763	0	0	0	5	5	1.539		2.977	0	14.952	0	0	0	0	0	0	7.484	0	5.46	0	1.781	0	0	0	0	0	0	0	8
20	0	0	0	0		12.758	티	ľ	17.649	0	0	ŀ	7	16.167	0	8. 289		20.03	26.756	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	3.716	0	0	0	0	0	0	7.677	0	2.97	0	0	0	0	0	0	0		2.489	0	0	4.106	0	0	0	0	0	0	0	0	8
35	0	0	0	0		5.866	0	0	0	0	9	5	0	0	0	0	0	18.42	0	0	0	0	0	7.858	0	0	0	0	0	0	0	0	0	0	0	6
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40	0	0	0	ō	0	0	0	0	0	0	0	9	0	0				18.376						7.839				2.798				15.654	56.829	9.68	24.62	32.847
45	6.136	15/195	جرا			12.224		4.704	11.274	• • •	6.873	• •	10.101	10.327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 .	0 ,	]0 ·	0
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50	090600	115910	94810	94980	12810	040050	08630	03050	03470	120003560	12690	30710	92400	09260	01160	15280	00/000	119440	)52250	)45340	05220	114030	)20220	126540	60710	93360	184810	11660	121510	724490	756190	)39600	149250	077170	93940	)02640
55	NT2RP70009060	NT2RP70015910	NT2RP 70094810	NT2RP70094980	PLACE60012810	PLACE60040050	SKMUS20008630	SKNMC20003050	SKNSH20003470	TESTI 200	TEST120012690	TEST120030710	TEST120082400	TRACH20009260	3NB6910001160	3NB6920015280	BRACE 1 0000 700	BRACE20019440	BRAWH20052250	KIDNE20045340	NT2NE20002590	NT2NE20014030	NT2R120020220		NT2R120060710	NT2R120083960	NT2R120084810	NT2RP70011660	NT2RP70021510		NT2RP70026190	NT2RP70039600	NT2RP70049250	NT2RP70071	NT2RP70093940	NTONG10002640

Table 32

5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
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15	6.757	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		39.669	0	0	0	0	0	0	0	٥	0		~l	2		2.307	13.958		27.646
20	0						0							1	1	1													8	I	∞	4.607	0	0	7.98	0
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25	ō	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		2.684		16.674	9.144	5.11	0		8.851	15.276
30	þ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.857	1	5.954	0	0		8.899
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15.173	7.667	0	0	3.517		8.139	0
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0	0			0						0		0	2	13.	5.347	
40	10.276	ı	Γ	100			100	1	1	60.1	20		100						90	50		F	24.	64.872	- 2	(2)	- 51.	9.6	15.	_	16.	4.	က	21.	8.12	14.01
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50	002650	000420	000670	098000	000910	00100	001180	001190	001220	002770	002870	007190	008240	009600	010750	011010	011400	011760	014080	014940	015270	015280	015860	017060	043960	002770	EST120001790	120007840	EST120009700	120027070	120053960	RACH20000790	010220	0001870	014840	040950
55	INTONG20002650	OCBBF 10000420	OCBBF 10000670	0CBBF10000860	0C8BF10000910	OCBBF 10001040	0C8BF10001180	OCBBF 10001190	0C8BF10001220	OCBBF20002770	OCBBF20002870	0CBBF20007190	OCBBF 20008240	OCBBF 20009980	0CBBF20010750	0CBBF20011010	OCBBF20011400	OCBBF 20011760	0CBBF20014080	OCBBF20014940	OCBBF20015270	0CBBF20015280	0CBBF 20015860	0CBBF20017060	PLACE60043960	SMINT20002770	TESTIZE	TEST 120	TESTIZ	TEST120	TEST120	TRACHZC	3NB6920010220	BRACE 1000 1870	BRAWH20014840	BRAWH20040950

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55	FEBRA20011970 KIDNEZ20052480 NT2RIZ0035560 NT2RIZ0035560 NT2RIZ0035560 NT2RIZ003980 NT2RP70000760 NT2RP7000020 NT2RP7000020 NT2RP7000020 NT2RP7000020 NT2RP7000020 NT2RP7000300 NT2RP7000300 NT2RP7000300 NT2RP700030000000 NT2RP200003380 NT2RIZ0003380 NT2RIZ0003380 NT2RIZ0003380 NT2RIZ0003380 NT2RIZ0003380 NT2RIZ0003380 NT2RIZ0033380 NT2RIZ0033380 NT2RIZ0033380 NT2RIZ0033380 NT2RIZ0033380 NT2RIZ0033380 NT2RP70053650 NT2RP70055200

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    7.294       1.233     1.005     0     0     0     0     0     0     7.294       1.233     0.319     0     0     0     0     0     0     0     0       1.233     0.319     0     0     0     0     0     0     0     0     0       1.233     0.312     0     0     0     0     0     0     0     0     0     0     0       1.234     0.374     0.374     0.374     0.374     0.377     0     0     0     0     0 | 4.24     11.522     0     0     0.5.254     0     0.8.131     5.44     8.543     0       1.233     1.005     0     0     3.859     5.55     0     0.8.575     3.31     0.949     7.453     5.281     1       3.621     4.919     0     0     0     0     0     0     0     7.294     0       0.382     0.519     0     0     0     0     0     0     0     0.49     0     0.744       7.34     9.972     0     0     0     0     0     0     0     0     0       7.34     9.972     0     0     0     0     0     0     0     0       0.301     0.409     0     0     0     0     0     0     0     0       8.923  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4.24     11.522     0     0     5.254     0     0     8.131     5.44     8.543     0       1.233     1.005     0     0     3.859     5.54     0     3.31     0.949     7.453     5.281     1.3       3.621     4.919     0     0     0     0     0     0     7.294     0     0     7.294       0.382     0.519     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0 | 4.24     11.522     0     0     3.859     5.54     0     8.131     5.44     8.543     0       1.233     1.005     0     0     3.859     5.54     0     3.31 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4.919         0         0         0         0         0         0         0         7.294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4,24         1,522         0         0         6,254         0         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0         6.44         8.543         0           3.623         1.035         0         0         0         0         0         0         7.294         7.43         8.543         0           3.621         4.513         1.005         0         0         0         0         0         7.294         0           0.382         4.519         0         0         0         0         0         0         7.294         0           0.382         0.519         0         0         0         0         0         0         0         7.244           7.34         9.972         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0         1.33         5.241         1.33         5.241         8.543         0         1.33         0.349         7.453         5.281         1.33         0.349         7.454         5.281         1.33         0.349         7.454         5.281         1.34         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744<!--</th--><th>4. 24         11.522         0         0         0.5.254         0         0.8.131         5.44         8.543         0           1. 233         1.005         0         0         3.675         3.31         0.949         7.453         5.261         1.3           3. 671         4.919         0         0         0         0         0         0         0.744           0.387         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0           3.671         4.919         0         0         3.659         5.54         0         0         0         7.234         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0<th>4,24         11,522         0         0         5,244         6,544         8,543         0         1,394         7,453         5,241         8,543         0         1,394         7,453         5,281         1,394         1,394         7,453         5,281         1,394         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11,522         0         0         5,254         0         0         8,131         5,44         8,543         0           1,233         1,055         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4, 24         11, 522         0         0         3,859         5,584         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         7,284         0           3,321         4,919         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0
        0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294 
       0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784</th></th></t<></th></th></th></t<></th> | 4.24       11.522       0       0       6.254       0       6.1254       0       0       8.131       5.44       8.543       0         1.233       1.005       0       0       0       0       0       0       0       7.294       0       7.294       0         3.621       4.919       0       0       0       0       0       0       7.294       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 | 4, 24       11,522       0       0       5,254       0       8,131       5,44       8,543       0         1,233       1,005       0       0       0       0       0       0       0       7,294       0         3,621       4,919       0       0       0       0       0       0       0       0       7,294       0         0,382       0,519       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 <t< th=""><th>4, 24         11,522         0         0         6,254         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         0         7,294         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0           1.233         1.005         0         0         3.859         5.5         0         8.75         3.31         0.949         7.453         5.281         1.3           3.621         4.919         0         0         0         0         0         0         0         7.294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4,24         1,522         0         0         6,254         0         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0         6.44         8.543         0           3.623         1.035         0         0         0         0         0         0         7.294         7.43         8.543         0           3.621         4.513         1.005         0         0         0         0         0         7.294         0           0.382         4.519         0         0         0         0         0         0         7.294         0           0.382         0.519         0         0         0         0         0         0         0         7.244           7.34         9.972         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0         1.33         5.241         1.33         5.241         8.543         0         1.33         0.349         7.453         5.281         1.33         0.349         7.454         5.281         1.33         0.349         7.454         5.281         1.34         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744        
0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744<!--</th--><th>4. 24         11.522         0         0         0.5.254         0         0.8.131         5.44         8.543         0           1. 233         1.005         0         0         3.675         3.31         0.949         7.453         5.261         1.3           3. 671         4.919         0         0         0         0         0         0         0.744           0.387         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0           3.671         4.919         0         0         3.659         5.54         0         0         0         7.234         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0<th>4,24         11,522         0         0         5,244         6,544         8,543         0         1,394         7,453         5,241         8,543         0         1,394         7,453         5,281         1,394         1,394         7,453         5,281         1,394         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11,522         0         0         5,254         0         0         8,131         5,44         8,543         0           1,233         1,055         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4, 24         11, 522         0         0         3,859         5,584         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         7,284         0           3,321         4,919         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0        
0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784</th></th></t<></th></th></th></t<> | 4, 24         11,522         0         0         6,254         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         0         7,294         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0       
 0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0           1.233         1.005         0         0         3.859         5.5         0         8.75         3.31         0.949         7.453         5.281         1.3           3.621         4.919         0         0         0         0         0         0         0         7.294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         < | 4,24         1,522         0         0         6,254         0         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.254         0         0         6.44         8.543         0           3.623         1.035         0         0         0         0         0         0         7.294         7.43         8.543         0           3.621         4.513         1.005         0         0         0         0         0         7.294         0           0.382         4.519         0         0         0         0         0         0         7.294         0           0.382         0.519         0         0         0         0         0         0         0         7.244           7.34         9.972         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0         1.33         5.241         1.33         5.241         8.543         0         1.33         0.349         7.453         5.281         1.33         0.349         7.454         5.281         1.33         0.349         7.454         5.281         1.34         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744         0.744 </th <th>4. 24         11.522         0         0         0.5.254         0         0.8.131         5.44         8.543         0           1. 233         1.005         0         0         3.675         3.31         0.949         7.453         5.261         1.3           3. 671         4.919         0         0         0         0         0         0         0.744           0.387         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th> <th>4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0           3.671         4.919         0         0         3.659         5.54         0         0         0         7.234         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0<th>4,24         11,522         0         0         5,244         6,544         8,543         0         1,394         7,453         5,241         8,543         0         1,394         7,453         5,281         1,394         1,394         7,453         5,281         1,394         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11,522         0         0         5,254         0         0         8,131         5,44         8,543         0           1,233         1,055         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4, 24         11, 522         0         0         3,859         5,584         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         7,284         0           3,321         4,919         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 
       0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0   
     0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784</th></th></t<></th></th> | 4. 24         11.522         0         0         0.5.254         0         0.8.131         5.44         8.543         0           1. 233         1.005         0         0         3.675         3.31         0.949         7.453         5.261         1.3           3. 671         4.919         0         0         0         0         0         0         0.744           0.387         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.254         0         0         8.131         5.44         8.543         0           3.671         4.919         0         0         3.659         5.54         0         0         0         7.234         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <th>4,24         11,522         0         0         5,244         6,544         8,543         0         1,394         7,453         5,241         8,543         0         1,394         7,453         5,281         1,394         1,394         7,453         5,281         1,394         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11,522         0         0         5,254         0         0         8,131         5,44         8,543         0           1,233         1,055         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4, 24         11, 522         0         0         3,859         5,584         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         7,284         0           3,321         4,919         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0    
    0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0  
      0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784</th></th></t<></th> | 4,24         11,522         0         0         5,244         6,544         8,543         0         1,394         7,453         5,241         8,543         0         1,394         7,453         5,281         1,394         1,394         7,453         5,281         1,394         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <t< th=""><th>4,24         11,522         0         0         5,254         0         0         8,131         5,44         8,543         0           1,233         1,055         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         &lt;</th><th>4, 24         11, 522         0         0         3,859         5,584         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         7,284         0           3,321         4,919         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0      
  0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784</th></th></t<> | 4,24         11,522         0         0         5,254         0         0         8,131         5,44         8,543         0           1,233         1,055         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0    
    0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         < | 4, 24         11, 522         0         0         3,859         5,584         0         8,131         5,44         8,543         0           1,233         1,005         0         0         0         0         0         0         7,284         0           3,321         4,919         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <t< th=""><th>4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734        
0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<><th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<> <th>4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784</th> | 4,24         11.522         0         0.3659         5.254         0         0.575         3.31         0.549         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         7.294         7.433         5.281         1.3           1,233         1,005         0         0         0         0         0         0         0         0         7.24         8.543         0         7.4         8.543         0         7.4         8.543         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <t< th=""><th>4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0
        0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734<!--</th--><th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th><th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th></th></t<> <th>4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th> | 4, 24, 11, 522         0         0         5, 254         0         0         8, 131         5, 44         8, 543         0         1, 23         1, 005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.264         0         8.131         5.44         8.543         0         1.33         1.33         1.34         8.543         0         1.33         1.34         8.543         0         1.33         1.34         0.343         7.453         5.281         1.34         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.254         0         0.875         3.31         5.44         8.543         0         1.3           3.621         1.233         1.005         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0  
      0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         5.254         0         8.131         5.44         8.543         0         1.381         5.24         8.543         5.89         1.39         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4,24         11,522         0         0         5,254         0         6,131         5,44         6,543         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         3,21         0         94         7,434         5,291         1.3         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4,24         11,522         0         0         6,254         0         8,131         5,44         8,543         0         1,33         2,261         1.3         3.31         0,949         7,433         5,281         1.3         3.31         0,949         7,433         5,281         1.3         0,382         0.519         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.74         11.572         6         6         5.131         5.44         8.543         0           1.233         4.918         6         6.526         0         6.515         3.31         0.949         7.434         0.734           3.621         4.918         0         0         0         0         0         0         0.744         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734         0.734 </th <th>4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th> <th>4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0</th> | 4,241         11,522         0         0         6,284         0         0         8,131         5,44         8,543         7,294         0         7,294         1         3,201         1,232         1,005         0         0         0         0         0         0         7,294         0         0         0         7,294         0         0         7,294         0         0         0         0         7,294         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4,24, 11,522         0         0         0,5254         0         0,131         5,44         8,543         0         7,294         7,294         7,294         1,132         0         7,294         7,294         7,294         0         7,294         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         7,294         0         0         1,029         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         3.554         0         0.515         3.31         5.44         8.543         0         7.294         10.993         7.524         0         7.294         0         0.744         8.543         0         9.94         7.524         0         0.744         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0        
0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 | 4.24         11.522         0         0         6.754         0         0         8.131         5.44         8.543         0           3.627         4.919         0         0         0         0         0         0         0         7.294         0.744         1.65         5.281         1.3           0.387         4.919         0         0         0         0         0         0         0         0.794         0.744         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784         0.784 |

Table 36

_		_	_	_		_	_		-	_	_	-	-		-	-		-	-		_	-	-	-	_
0	0	0	22.218	0		0	0	0	0	0	٦	0	0	0	4.424	0	0	0	0		0	9.567	0	0	3.889
0	0	0	0	0	0	9.413	0	0	0	0	0	4.409	0	0	3.193	3.126	4.511	0	0	0	0	0	0	0	0
2.382	0	0	8.298	0	0	3.247	0	2.216		5.95	0	0	0	0	4.957	6.47	0	0	0	0	0	3.573	0	13.228	0
1.517	1.875	0	0	0	12.193	8.272	0	]0	20.542	10	0	0	2.708	3.46	5.261	4.12	0	0	0	11.522	0	2.276	0	0	1.85
0	0	0	15.797	1.683	0	0	0	0	5.117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	1.09	5.901	2.002	0		6,628	0	0	2.812	0	0	0	1.994	5.756	0	0	11.153	0	0	0	0	0.895
0	0	4.612	0	0	0	0	10.223	2.34	-	0	0	4.817	0	5.736	8.721	0	14.787	0	0	9.55	0	0	0	0	9.5
1.465	0	0	0	0	17.662	1.997	0	0	16.531	3.659	0	0	0.872	3.342	1.016	9.947	0	0	0	5.564	0	0	0	0	0
0	0	0	0	0	0	0	0	2.152	0	0	0	0	0	0	3.208	0	0	13.581	0	0	0	0	0	0	0
1.519	1.878	5.572	0	0	0	4.142	0	1.413	3.428	0	ō	0	0	0	3.161	2.063	0	8.922	0	0	0	0	0	0	0.926
4.614	2.852	4.232	8.037	1.713	9.271	9.435	18.758	2.147	5.207	28.812	51.651	22.096	9.611	5.263	14.402	6.266	18.088	13.549	22.537	26.286	19.068	10.382	3.361	12.811	7.033
1.606	9.928	2.946	5.596	1.192	6.455	24.087	6.53	1.495	14.501	8.024	17.981	3.077	2.868	10.992	7.799	2.181	6.297		15.691	6.1	13.276	7.229	1.17	8.92	1.959
7.094	4.385	4.337	4.119	0.878	4.752	24.178	14.42	7.70	8.005	5.906	13.235	9.029	1.407	26.971	4.921	3.211	18.539	6.944	3.85	8.981	29.316	7.095	3.445	6.566	4.326
FEBRA20076220	HSYRA20002480	IMR3220014350	MESAN20001490	NHNPC20002060	NY2NE10000180	NT2NE20003920	NT2R120006690	NT2R120013850	NT2R120014500	NT2R120025540	NT2R120033010	NT2R120075720	NT2RP60000350	NT2RP60001230	NT2RP70028750	NT2RP70029060	NT2RP70032030	NTONG20003340	OCBBF20000130	OCBBF20002310	0C8BF20009040	SKNMC20000650	SMINT20003960	TEST120026320	TEST120080200

	Clone ID	FEHRT	HEART
5	KIDNE20062480	36.242	0
	NT2R120033040	40.301	0
	NT2RP60000350	32.381	0
	BGGI120010970	0	9.222
	BRACE10000420	0	23.223
10	BRACE10001150	0	1.324
	BRACE20003320	0	31.422
	BRACE20077980	0	15.184
	BRAWH10000370	0	65.363
15	BRAWH20000340	0	22.282
	BRAWH20011660	0	6.271
	BRAWH20014840	0	16.703
	FEBRA20008740	0	7.73
	FEBRA20072800	0	74.711
20	HEART20000350	0	100
	HEART20000990	0	100
	HEART20003090	0	100
	HEART20004110	0	100
25	HEART20004480	0	100
20	HEART20004920	0	100
	HEART20005060	0	58.813
	HEART20005200	0	100
	HEART20005680	0	100
30	HHDPC20001150	0	23.261
	HLUNG20005010	0	5.241
	HSYRA20014200	0	12.434
	IMR3220013170	0	9.002
. 35	KIDNE20004970	0	26.564
33	NT2RI20000640	0	3.219
	NT2RI20006710	0	5.218
	NT2RI20015400	0	0.593
	NT2RI20026540	0	8.062
40	NT2RI20037510	0	5.211
	NT2R120057230	0	20.346
	NT2R120064120	0	17.978
	NT2RI20071330	0	14.303
45	NT2RI20071480	0	24.983
<b>40</b>	NT2RI20077540	0	60.787
	NT2RI20084810	0	13.301
	NT2RI20087910	0	6.007
	NT2RP70000760	0	9.681
50	NT2RP70024500	0	41.168
	NT2RP70029060	0	6.444
	NTONG10001820	0	13.117
	PLACE60012810	0	32.247
55	PLACE60043120	0	8.491
50	PROST20000530	0	23.813
	SKMUS10000640	0	27.233
	SKMUS20004580	0	8.731

Table 37 (continued)

Clone ID	FEHRT	HEART
SKMUS20015010	0	18.378
SMINT20002770	0	6.315
TESTI20033250	0	58.713
TESTI20074640	0	25.552
UMVEN20001330	0	6.282

Tab	le 38	
Clone ID	FÉKID	KIDNE
3NB6920003300	0	2.071
3NB6920009120	0	2.884
BGGI120010970	0	4.336
BRACE20004210	0	3.583
BRACE20005250	0	6.242
BRACE20011170	0	3.303
BRACE20020910	0	19.111
BRACE20026850	0	34.356
BRACE20080970	0	20.33
BRAWH20000340	0	10.476
BRAWH20006970	0	3.96
BRAWH20011660	0	5.897
FCBBF20001950	0	65.363
FEBRA20021940	0	1.687
FEBRA20043250	0	12.177
HLUNG10000640	0	23.921
IMR3220007420	0	2.375
IMR3220014350	0	4.092
KIDNE10000280	0	100
KIDNE10000500	0	15.868
KIDNE10001040	0	100
KIDNE10001430	0	100
KIDNE10001450	0	19.052
KIDNE10001520	0	100
KIDNE20000410	0	100
KIDNE20000510	0	100
KIDNE20000700	0	100
KIDNE20000850	0	4.788
KIDNE20001670	0	100
KIDNE20001920	0	100
KIDNE20002440	0	37.565
KIDNE20002450	0	100
KIDNE20002660	0	7
KIDNE20003150	0	100
KIDNE20003300	0	20.536
KIDNE20003490	0	64.026
KIDNE20003750	0	100
KIDNE20004030	0	5.561
KIDNE20004220	0	35.77
KIDNE20004970	0	12.49

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Table 38 (continued)

	Clone ID	FEKID	KIDNE
	KIDNE20005130	0	100
5	KIDNE20005170	0	81.524
	KIDNE20005190	0	100
	KIDNE20005740	0	2.3
	KIDNE20031850	0	16.193
	KIDNE20033050	0	3.381
10	KIDNE20033350	0	100
	KIDNE20033570	0	53.825
	KIDNE20033730	0	100
	KIDNE20033770	0	100
15	KIDNE20037520	0	100
	KIDNE20039410	0	100
	KIDNE20039940	0	43.968
	KIDNE20040340	0	100
	KIDNE20040540	0	49.114
20	KIDNE20040840	0	100
	KIDNE20042620	0	100
	KIDNE20042940	0	100
	KIDNE20042950	0	100
25	KIDNE20043440	0	100
	KIDNE20045200	0	100
	KIDNE20045340	0	17.53
	KIDNE20045790	0	100
	KIDNE20046810	0	100
30	KIDNE20048280	0	100
	KIDNE20048640	0	34.264
	KIDNE20048790	0	100
	KIDNE20049810	0	100
35	KIDNE20050420	0	35.626
	KIDNE20052960	0	100
	KIDNE20053360	0	58.142
	KIDNE20054000	0	49.697
	KIDNE20054770	0	100
40	KIDNE20056290	0	100
	KIDNE20056760	0	16.262
	KIDNE20059080	0	100
	KIDNE20059370	0	88.03
45	KIDNE20060140	0	13.852
	KIDNE20060300	0	2.906
	KIDNE20060530	0	100
	KIDNE20060620	0	100
	KIDNE20061490	0	100
50	KIDNE20062480	0	2.972
	KIDNE20062990	0	31.685
	KIDNE20063530	0	26.747
	KIDNE20063760	0	100
55	KIDNE20066520	0	70.185
	KIDNE20067600	0	100
	KIDNE20067750	0	8.487
	KIDNE20068800	0	24.137

Table 38 (continued)

	Clone ID	FEKID	KIDNE
	KIDNE20070050	0	66.711
5	KIDNE20070770	0	100
	KIDNE20071860	0	39.822
	KIDNE20073280	0	4.537
	KIDNE20073520	0	8.83
	KIDNE20073560	0	100
10	KIDNE20074220	0	100
	KIDNE20075690	0	100
	KIDNE20078100	0	100
	KIDNE20078110	0	100
15	LIVER10000790	0	15.673
	MAMGL10000320	0	1.138
	NB9N410000470	0	3.598
	NT2NE20053710	0	1.127
	NT2RI20006710	0	2.454
20	NT2RI20013420	0	2.015
	NT2RI20016570	0	23.435
	NT2RI20018460	0	20.967
	NT2RI20025540	0	5.573
25	NT2RI20040590	0	13.676
	NT2RI20065530	0	3.41
	NT2R120087490	0	1.408
	NT2RI20087910	0	2.824
	NT2RP60000350	0	5.311
30	NT2RP60001230	0	5.09
	NT2RP70043730	0	14.846
	NT2RP70069860	0	10.745
	NT2RP70074220	0	3.96
35	OCBBF20014940	0	49.164
	PLACE60014430	0	4.704
	PLACE60020840	0	2.658
	PLACE60043120	0,	3.992
	PROST10003430	0	25.547
40	SKNMC20000970	0	1.143
	SKNSH20001510	0	20.208
	SMINT10000160	0	38.817
	SMINT20003960	0	1.625
45	SPLEN20000470	0	66.711
	SPLEN20001340	0	88.909
	SPLEN20003570	0	31.635
	STOMA10000470	0	17.849
	SYNOV10001280	0	6.616
50	TESTI10000700	0	25.214
	TESTI20027070	0	14.795
	TESTI20040310	0	2.58
	TRACH10000300	0	11.119
55	TRACH20000790	0	4.534
,	TRACH20002500	0	35.282
	TRACH20007800	0	5.605
l	KIDNE10000080	77.87	22.13

Table 38 (continued)

Clone ID	FEKID	KIDNE
KIDNE20044110	92. 49	7.51
NT2RI20033040	40.707	0
NT2RI20037510	60.346	0
NT2RP70065270	40.543	0
TRACH20012890	52.552	0

Tal	ole 39	
Clone ID	FELNG	HLUNG
BNGH410001980	0	16.113
BRACE10000420	0	7.831
BRACE10001150	0	1.339
BRACE20014770	0	28.126
BRACE20018550	0	25.65
BRAWH20006970	0	8.521
BRAWH20014610	0	7.03
FEBRA20008810	0	19.713
FEBRA20015840	0	53.019
FEBRA20044120	0	15.75
HHDPC20001490	0	25.611
HLUNG10000240	0	100
HLUNG10000300	0	100
HLUNG10000370	0	100
HLUNG10000640	0	51.466
HLUNG10000760	0	12.838
HLUNG10000990	0	100
HLUNG10001050	0	100
HLUNG10001100	0	100
HLUNG20000680	0	72.532
HLUNG20001160	0	100
HLUNG20001250	0	100
HLUNG20001420	0	79.349
HLUNG20001760	0	100
HLUNG20002550	0	100
HLUNG20003140	0	14.018
HLUNG20004120	0	42.131
HLUNG20004800	0	100
HLUNG20005010	0	5.302
HSYRA20014200	0	12.578
KIDNE20002660	0	15.061
KIDNE20033050	0	3.637
NT2NE20014350	0	28.99
NT2R120016570	0	9.167
NT2R120026540	0	8.156
NT2RI20051500	0	21.652
NT2RI20064120	0	9.093
NT2RI20083960	0	17.851
NT2R120085260	0	5.474
NT2RI20087490	0	3.03

Table 39 (continued)

Clone ID	FELNG	HLUNG
NT2RP70009060	0	18.337
NT2RP70011660	0	5.822
NT2RP70029060	0	6.519
NT2RP70055020	0	10.451
NT2RP70074220	0	8.521
NT2RP70076100	0	25.546
NTONG10002460	0	16.426
NTONG20008000	0	7.189
PLACE60043120	0	8.589
SKMUS20016340	0	15.317
SKNMC20005930	0	13.727
SMINT20000180	0	38.989
SMINT20002390	0	51.283
SMINT20002770	0	12.776
SMINT20003960	0	10.489
STOMA10000470	0	38.402
STOMA20001880	0	52.43
SYNOV20013740	0	23.798
TESTI20036250	0	32.684
TESTI20080200	0	2.927
TRACH20004610	0	28.395
BRACE20004210	86.645	0
IMR3220007420	57.437	0

Table 40

Alteration of the expression level of each clone due to TNF-α or LPS stimulation to human monocyte cell line THP-1 and alteration of the expression level of each clone due to co-culture of gastric cancer cell line MKN45 with Helicobacter pylori. ctl, TNF and LPS in the column of THP-1, respectively, indicate the relative expression levels in unstimulated THP-1, in the cell stimulated with 10 ng/mL TNF-α for 3 hours, and in the cell stimulated with 1 μg/mL LPS for 3 hours; ctl and H. pylori in the column of MKN45 indicate the relative expression levels in MKN45 cultured without Helicobacter pylori and in MKN45 co-cultured with Helicobacter pylori (at a ratio of MKN45: Helicobacter pylori = 1:100 cells (colonies) for 3 hours, respectively

Clone name	THP-1			MKN45	
	ctl	TNF	LPS	ctl	H.pylori
3NB6920000290	2.0	1.9	0.4	0.1	0.0
ADRGL10000180	2.2	5.1	2.0	3.3	5.7
BNGH410001370	0.8	1.4	0.3	0.4	0.5
BRACE10001590	1.5	2.3	1.6	0.4	0.8
BRACE10001690	2.3	3.6	2.9	2.2	1.8
BRACE20010650	2.1	2.2	2.1	2.2	2.1
BRACE20013400	2.6	8.0	0.2	1.5	1.1
BRACE20030780	0.3	1.3	0.0	2.2	1.7
BRACE20034490	2.0	1.6	0.6	2.5	0.3
BRACE20077640	0.4	1.0	0.1	1.7	0.3
BRACE20079530	0.6	0.1	0.1	0.0	0.2
BRACE20083850	0.9	2.5	1.3	1.1	0.0
BRACE20091880	1.5	0.5	0.1	0.5	0.0

Table 40 (continued)

	Clone name	THP-1		MKN45		
		ctl	TNF	LPS	ctl	H.pylori
5	BRAWH10001620	1.8	1.0	0.3	1.1	3.1
	BRAWH20004430	0.2	1.4	0.2	0.5	0.5
	FCBBF10006180	0.1	3.6	1.3	2.1	0.7
	FEBRA20003780	1.5	3.0	2.8	1.7	1.3
10	FEBRA20006800	0.7	2.4	0.9	0.0	1.6
	FEBRA20008810	2.3	1.4	0.9	2.3	1.3
	FEBRA20012940	0.4	1.0	0.2	0.7	0.6
	FEBRA20015840	0.1	3.3	2.6	0.1	0.0
	HCASM10000610	1.8	2.0	2.1	2.3	2.2
15	HEART20000350	2.0	3.3	1.8	2.3	0.5
	HEART20004480	0.0	0.3	0.0	3.5	3.0
	HEART20005060	1.2	0.6	0.0	4.8	4.5
	HHDPC20000950	0.4	0.2	0.1	1.4	0.7
20	HLUNG10000370	0.0	1.3	0.2	2.6	0.7
	HLUNG20001160	0.6	3.7	1.7	0.1	0.0
	HLUNG20001760	1.4	0.5	0.0	0.3	0.0
	HSYRA20003470	1.1	1.5	0.6	1.1	0.3
	HSYRA20013320	0.1	1.7	0.7	1.4	0.7
25	IMR3210001580	0.4	0.0	0.0	0.3	0.2
	IMR3210002660	0.8	0.4	0.2	0.5	0.4
	IMR3220008380	0.4	0.9	0.4	1.1	0.5
	IMR3220008590	2.0	0.3	0.9	2.1	3.4
30	KIDNE10001520	0.4	1.2	0.7	3.4	2.2
30	KIDNE20000850	0.7	0.7	0.4	1.1	0.5
	KIDNE20003490	0.9	1.7	0.9	0.3	1.9
	KIDNE20005170	0.9	0.7	0.3	6.4	0.2
	KIDNE20033730	1.2	1.6	1.8	0.5	0.5
35	KIDNE20040540	0.1	2.5	0.8	0.1	0.2
	KIDNE20050420	0.7	0.5	0.7	0.2	0.3
	KIDNE20061490	0.1	1.2	0.6	0.2	0.1
	KIDNE20062990	0.7	3.5	0.7	0.0	0.0
40	LIVER20000330	6.0	7.4	1.1	7.3	0.6
40	NT2NE10001630	0.1	2.6	1.4	2.5	2.7
	NT2NE10001850	1.1	0.3	0.1	0.4	1.1
	NT2NE20003920	0.6	3.3	1.6	0.5	0.2
	NT2NE20005500	0.6	2.6	2.2	0.1	0.2
45	NT2RI20009740	1.2	1.9	0.9	0.1	0.0
	NT2RI20014500	0.2	3.5	1.7	0.0	0.0
	NT2RI20016570	1.2	3.6	3.1	0.0	0.1
	NT2RI20018660	4.3	0.5	1.3	1.9	1.8
50	NT2RI20021520	1.1	1.5	1.1	1.1	0.5
	NT2RI20050870	1.0	0.6	0.3	0.7	0.8
	NT2RI20053350	2.2	1.0	0.9	1.5	0.6
	NT2RI20070480	1.5	0.3	0.0	0.0	0.0
	NT2RI20073030	0.4	0.6	0.4	2.0	0.8
55	NT2RI20078270	0.2	2.6	0.5	1.4	0.3
	NT2RI20078790	1.7	2.4	0.7	2.2	1.6
	NT2R120083360	0.1	0.4	0.2	0.1	0.3

Table 40 (continued)

	Clone name	THP-1		MKN45		
		ctl	TNF	LPS	ctl	H.pylori
5	NT2RP60000080	2.2	2.5	1.5	2.0	1.1
	NT2RP60000390	1.6	2.3	1.2	2.3	0.4
	NT2RP60000590	1.6	2.0	1.3	2.5	1.3
	NTONG10000980	0.9	0.8	0.8	1.9	0.0
10	NTONG10002570	0.1	5.4	0.5	0.0	0.0
	PLACE60020160	0.8	1.2	0.6	0.0	0.0
	PLACE60026990	0.5	0.2	0.1	3.2	2.1
	PLACE60047380	1.6	0.7	0.9	1.8	2.2
	PUAEN10003220	0.1	1.9	1.2	0.0	0.1
15	SKNMC10000290	0.4	1.2	0.5	0.9	0.2
	SKNMC10001590	1.7	1.9	0.8	1.0	0.4
	SKNMC20000650	1.1	1.1	0.8	0.1	0.1
	STOMA20002570	0.3	3.1	1.5	0.6	0.6
20	STOMA20002890	1.8	0.8	0.4	0.1	0.2
20	SYNOV20001770	1.7	0.5	0.5	1.7	4.2
	TESTI10000230	2.7	4.6	3.1	2.3	1.7
	TESTI10000550	0.4	0.1	0.3	0.1	2.8
	TESTI20011340	0.3	2.3	2.2	2.2	1.9
25	THYMU10005580	1.1	2.1	1.1	1.5	1.1
	TRACH10000630	0.3	0.5	0.2	2.7	2.6
	TRACH20001960	9.4	2.7	1.3	1.0	0.4
	UMVEN10001220	1.9	2.8	1.0	0.8	0.2
30	UMVEN20001330	2.2	2.2	0.0	1.0	0.1
30	UTERU20004850	1.7	6.3	2.3	0.0	0.3

Homology Search Result Data

35 [0295] Data obtained by the homology search for full-length nucleotide sequences and deduced amino acid sequences.

[0296] In the result of the search shown below, both units, aa and bp, are used as length units for the sequences to be compared.

[0297] Each data includes Clone name, Definition in hit data, P value, Length of sequence to be compared, Homology, and Accession number (No.) of hit data. These items are shown in this order and separated by a double-slash mark, //. 3NB6910000180

3NB6910000850

3NB6910001160//STEROIDOGENIC ACUTE REGULATORY PROTEIN PRECURSOR.//9.70E-08//160aa//21%// Q28996

45 3NB6910001290

3NB6910001730

3NB6920000290

3NB6920002810//PUTATIVE ATP-DEPENDENT RNA HELICASE T26G10.1 IN CHROMOSOME III.//4.70E-154// 442aa//64%//P34580

3NB6920003300//YIP1 PROTEIN.//1.80E-35//181aa//41%//P53039

3NB6920005450

3NB6920009120

3NB6920010020//REGULATOR OF G-PROTEIN SIGNALING 3 (RGS3) (RGP3).//1.60E-89//179aa//95%//P49796 3NB6920010220//putative C3HC4-type RING zinc finger protein//3.70E-38//374aa//29%//AAG27460

55 3NB6920013490

3NB6920014330

3NB6920014710//Homo sapiens hepatocellular carcinoma-associated antigen 58 (HCA58) mRNA, complete cds.// 5.40E-130//236aa//100%//AF220416

3NB6920015110//CARG-BINDING FACTOR-A (CBF-A).//7.50E-140//290aa//90%//Q99020

3NB6920015280//LIGHT-MEDIATED DEVELOPMENT PROTEIN DET1.//4.60E-55//263aa//35%//P48732

3NB6920015570//ZINC FINGER PROTEIN 135.//7.90E-129//365aa//60%//P52742

3NB6920016370

5 3NB6920017190

ADRGL10000020//Homo sapiens Kelch-like 1 protein (KLHL1) mRNA, complete cds.//2.90E-298//546aa//100%//AF252283

ADRGL10000180

ADRGL10000650//ZING FINGER PROTEIN 135.//2.20E-76//205aa//64%//P52742

ADRGL10001600//CYTOCHROME P450 XXIB (EC 1.14.99.10) (STEROID 21-HYDROXYLASE) (P450-C21B).//2. 50E-248//397aa//98%//P08686

ADRGL10001650//IMIDAZOLONEPROPIONASE (EC 3.5.2.7) (IMIDAZOLONE-5-PROPIONATE HYDROLASE).// 6.10E-67//418aa//37%//P42084

ADRGL10001820

A0R6L20000740//RHO-GTPASE-ACTIVATING PROTEIN 6 (RHO-TYPE GTPASE-ACTIVATING PROTEIN RHOG-APX-1).//1.50E-67//327aa//43%//043182

ADRGL20003230

ADRGL20004280

ASTR010000180//DYNEIN INTERMEDIATE CHAIN 3, CILIARY.//1.10E-32//207aa//33%//016960

20 ASTR020000950

ASTR020004170//Homo sapiens sorting nexin 5 (SNX5) mRNA, complete cds.//5.20E-47//98aa//100%//AF121855 ASTR020004800

BGGI110002850

BGGI120001610//CELL DIVISION CONTROL PROTEIN 1.//3.10E-14//218aa//28%//P40986

25 BGGI120005330//INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE 2 (EC 1.1.1.205) (IMP DEHYDROGENASE 2) (IMPDH-II) (IMPD 2).//1.40E-218//415aa//80%//P12269

BGGI120005440//Homo sapiens snurportin1 mRNA, complete cds.//3.50E-199//360aa//99%//AF039029

BGGI120006840//Homo sapiens sirtuin type 2 (SIRT2) mRNA, complete cds.//7.60E-197//371aa//98%//AF083107 BGGI120006930//POLYHOMEOTIC-PROXIMAL CHROMATIN PROTEIN.//2.30E-11//100aa//42%//P39769

39 BGGI120010970//Homo sapiens contactin associated protein (Caspr) mRNA, complete cds.//3.50E-103//464aa// 36%//U87223

BGGI120017140//ZINC FINGER PROTEIN 124 (HZF-16),//1.60E-127//217aa//100%//Q15973

BNGH410000030//R.norvegicus trg mRNA.//3.10E-111//361aa//60%//X68101

BNGH410000130

35 BNGH410000170

BNGH410000290

BNGH410000330

BNGH410000340//DIPEPTIDYL PEPTIDASE IV (EC 3.4.14.5) (DPP IV) (THYMOCYTE-ACTIVATING MOLECULE) (THAM).//3.20E-36//262aa//38%//P28843

40 BNGH410000390//DYNEIN BETA CHAIN, CILIARY.//4.60E-136//331aa//72%//P23098

BNGH410000800//Homo sapiens zinc finger protein dp mRNA, complete cds.//2.80E-11//103aa//41%//AF153201 BNGH410001040

BNGH410001180//Homo sapiens low density lipoprotein receptor related protein-deleted in tumor (LRPDIT) mRNA, complete cds.//0//752aa//96%//AF176832

45 BNGH410001370//BRUSH BORDER 61.9 KD PROTEIN PRECURSOR.//6.30E-72//555aa//31%//Q05004 BNGH410001530

BNGH410001770//INOSINE-5'-MONOPHOSPHATE DEHYDROGENASE 1 (EC 1.1.1.205) (IMP DEHYDROGENASE 1) (IMPDH-I) (IMPD 1).//2.10E-270//514aa//99%//P20839 BNGH410001900//Rattus norvegicus schlafen-4 (SLFN-4) mRNA, complete cds.//3.80E-81//568aa//35%//AF168795

50 BNGH410001980//TETRACYCLINE RESISTANCE PROTEIN, CLASS E (TETA(E)).//1.20E-15//345aa//26%//Q07282 BNGH420004740

BNGH420005320//ZINC FINGER PROTEIN 36 (ZINC FINGER PROTEIN KOX18) (FRAGMENT).//6.40E-179// 322aa//99%//P17029

BRACE10000200

55 BRACE10000420//PROTEIN PHOSPHATASE 2C ABI2 (EC 3.1.3.16) (PP2C).//2. 10E-31//202aa//37%//004719 BRACE10000700

BRACE10000730//HYPOTHETICAL 37.2 KDA PROTEIN C12C2.09C IN CHROMOSOME II.//9.60E-05//100aa//34%//Q09749

BRACE10000930/TNF RECEPTOR ASSOCIATED FACTOR 2 (TRAF2).//2.10E-96//197aa//92%//P39429 BRACE10001150//NUCLEOSOME ASSEMBLY PROTEIN 1-LIKE 2 (BRAIN-SPECIFIC PROTEIN, X- LINKED),// 3.60E-17//144aa//36%//P51860 BRACE10001590 BRACE10001660 BRACE10001690 BRACE10001870//MICROTUBULE-ASSOCIATED PROTEIN 4.//8.30E-12//49aa//81%//P27816 BRACE20000770 BRACE20001000 BRACE20001410 BRACE20002800//MNN4 PROTEIN.//8.50E-10//237aa//29%//P36044 BRACE20003320 BRACE20004210 BRACE20005050 BRACE20005250//DRR1 PROTEIN (TU3A PROTEIN).//5.20E-74//144aa//100%//095990 BRACE20005450 BRACE20005650 BRACE20005770//Homo sapiens PHR1 isoform 4 (PHRET1) mRNA, alternatively spliced, complete cds.//5.80E-48// 91aa//100%//AF093249 BRACE20006980//ANKYRIN 2 (BRAIN ANKYRIN) (ANKYRIN B) (ANKYRIN, NONERYTHROID).//2.40E-16//279aa// 30%//Q01484 BRACE20007180//CALCITONIN GENE-RELATED PEPTIDE II PRECURSOR (CGRP-II) (BETA-TYPE CGRP).// 2.70E-61//127aa//99%//P10092 BRACE20008850//CALDESMON (CDM).//3.50E-08//203aa//29%//P12957 BRACE20009880 BRACE20010650 BRACE20010700 BRACE20011170 BRACE20011430//Zea mays clone AGPZm1 arabinogalactan protein (agp) mRNA, partial cds.//3.70E-06//176aa// 33%//AF134579 BRACE20011880 BRACE20013400 BRACE20013520 BRACE20013740 BRACE20013750 BRACE20014230 BRACE20014530//36.4 KDA PROLINE-RICH PROTEIN.//5.50E-10//102aa//34%//Q00451 BRACE20014550//HEAT SHOCK FACTOR PROTEIN 1 (HSF 1) (HEAT SHOCK TRANSCRIPTION FACTOR 1) (HSTF 1).//1.00E-118//229aa//99%//Q00613 BRACE20014770//HUNTINGTIN ASSOCIATED PROTEIN 1 (HAP1).//1.70E-22//81aa//39%//P54256 BRACE20014920//PROTEIN-TYROSINE PHOSPHATASE-LIKE N PRECURSOR (R-PTP-N) (ISLET CELL AUTOAN-TIGEN 512) (ICA512).//3.10E-42//110aa//84%//P56722 BRACE20015080//PROTEIN-LYSINE 6-OXIDASE PRECURSOR (EC 1.4.3.13) (LYSYL OXIDASE).//1.30E-06// 110aa//35%//Q05063 BRACE20015430 BRACE20016730//Mus musculus mdgl-1 mRNA, complete cds.//3.00E-54//118aa//83%//AF190624 BRACE20017370//P.vivax pva1 gene.//2.70E-20//99aa//49%//X92485 BRACE20018550//B-CELL LYMPHOMA 3-ENCODED PROTEIN (BCL-3 PROTEIN),//9.20E-16//300aa//30%// BRACE20018590//NOVEL ANTIGEN 2 (NAG-2) (TSPAN-4).//8.30E-28//69aa//91%//014817 BRACE20018650 BRACE20018980 BRACE20019440 BRACE20020500 BRACE20020910//ZINC-FINGER PROTEIN RFP (RET FINGER PROTEIN).//1.10E-31//91aa//49%//Q62158

BRACE20021510 BRACE20021760

BRACE20022020//SERINE/THREONINE-PROTEIN KINASE SNK (EC 2.7.1.-) (SERUM INDUCIBLE KINASE).// 1.60E-41//102aa//47%//P53351

BRACE20022270

BRACE20024090//HOMEOBOX PROTEIN MEIS3 (MEIS1-RELATED PROTEIN 2).//1.50E-108//210aa//89%// P97368

BRACE20024310//P53-INDUCED PROTEIN 11.//5.00E-37//111aa//69%//014683

BRACE20024680//Homo sapiens GalNAc-T9 mRNA for UDP-GalNAc:polypeptide N-acetylgalactosaminyltrans-ferase, complete cds.//3.00E-153//244aa//99%//AB040672

BRACE20024780//NEURALIZED PROTEIN.//1.20E-14//95aa//38%//P29503

10 BRACE20024950

BRACE20025900

BRACE20026350//SODIUM/NUCLEOSIDE COTRANSPORTER (NA(+)/NUCLEOSIDE COTRANSPORTER).// 3.40E-25//53aa//96%//P26430

BRACE20026850//Homo sapiens androgen-regulated short-chain dehydrogenase/reductase 1 (ARSDR1) mRNA, complete cds.//6.50E-120//313aa//72%//AF167438

BRACE20027360//Homo sapiens mRNA for fructosamine-3-kinase (FN3K gene)//3.00E-80//150aa//91%//AJ404615 BRACE20027520

BRACE20027550//REGULATOR OF MITOTIC SPINDLE ASSEMBLY 1 (RMSA-1).//1.40E-19//128aa//44%//P49646 BRACE20027720//HYDROXYACYLGLUTATHIONE HYDROLASE (EC 3.1.2.6) (GLYOXALASE II) (GLX II).//2.50E-

90 35//133aa//50%//Q16775

BRACE20027920//L-RIBULOKINASE (EC 2.7.1.16).//5.20E-40//387aa//29%//P94524

BRACE20027960//Rattus norvegicus neurabin mRNA, complete cds,//2.70E-10//48aa//66%//U72994

BRACE20028120//Mus musculus GTPase Rab37 (Rab37) mRNA, complete cds.//4.60E-48//129aa//78%//AF233582 BRACE20028600

25 BRACE20028610

BRACE20028960//Mus musculus mRNA for Ca2+ dependent activator protein for secretion, complete cds.//6.10E-195//473aa//74%//D86214

BRACE20030780

BRACE20031100//PATCHED PROTEIN HOMOLOG 1 (PTC1) (PTC).//3.00E-23//234aa//25%//Q61115

30 BRACE20032850

BRACE20033190

BRACE20033980

BRACE20034310

BRACE20034490

BRACE20035160

BRACE20035270

BRACE20035390 BRACE20035940

BRACE20071380//PR0B CALCIUM-TRANSPORTING ATPASE 3 (EC 3.6.1.38) (ENDOPLASMIC RETICULUM CA2+-ATPASE).//3.50E-65//343aa//39%//P39524

BRACE20071530

BRACE20071740//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//4.90E-157//380aa//61%//P51523 BRACE20071970

BRACE20072010

45 BRACE20072320

BRACE20072810

BRACE20074010//Oryctolagus cuniculus peroxisomal Ca-dependent solute carrier mRNA, complete cds. //2. 30E-140//383aa//65%//AF004161

BRACE20074470//Mus musculus partial mRNA for mouse fat 1 cadherin (mfat1 gene). //3.90E-131//454aa//57%//

50 AJ250768 BRACE20075020

BRACE20075270

BRACE20075380

BRACE20075630

55 BRACE20076210

 ${\tt BRACE20076410//Mouse\ mRNA\ for\ seizure-related\ gene\ product\ 6\ type\ 2\ precursor,\ complete\ cds.//5.10E-173//320aa//94\%//D64009}$ 

BRACE20076460

BRACE20076630//Dog nonerythroid beta-spectrin mRNA//1.60E-05//86aa//37%//L02897 BRACE20076850//Homo sapiens cell cycle checkpoint protein CHFR mRNA, complete cds.//1.20E-54//104aa//99%// AF170724 BRACE20077080 BRACE20077270 BRACE20077610 BRACE20077640 BRACE20077670 BRACE20077680 BRACE20077840//Putative Protein that mediates attachment of autophagosomes to microtubules, by similarity to yeast aut2 [Schizosaccharomyces pombe].//1.00E-08//200aa//26%//CAC00556 BRACE20077980 BRACE20078680 PROTEIN.//2.40E-05//140aa//30%//P44678 BRACE20078820//actin-depolymerizing protein N-WASP//5.50E-06//116aa//37%//S72273 BRACE20079020 BRACE20079530 BRACE20080970 BRACE20081140 BRACE20083800 BRACE20083850//Rattus norvegicus NRBF-2 mRNA for nuclear receptor binding factor-2, complete cds.//1.30E-135// 288aa//90%//AB024930 BRACE20084430//PROTEIN DISULFIDE ISOMERASE-RELATED PROTEIN PRECURSOR (EC 5.3.4.1) (PDIR).// 8.30E-102//186aa//98%//Q14554 BRACE20084800 BRACE20084880 BRACE20086530 BRACE20086550//Homo sapiens mRNA for GABAB receptor, subunit 1b.//8.30E-22//55aa//90%//AJ012186 BRACE20087080 BRACE20087540 BRACE20088570 BRACE20089600 BRACE20089990 BRACE20090140 BRACE20091880//Mus musculus mRNA for synaptotagmin V, complete cds.//9.90E-85//166aa//96%//AB026802 BRACE20092120 BRACE20092740 BRACE20092750 BRACE20093070//P120 PROTEIN.//1.40E-13//121aa//41%//P30999 BRACE20093110 BRACE20093610 BRACE20094370 BRACE20095170 BRAWH10000010//Homo sapiens PMEPA1 protein (PMEPA1) mRNA, complete cds.//2.00E-84//250aa//67%// BRAWH10000020//Homo sapiens putative hepatic transcription factor (WBSCR14) mRNA, complete cds.//1.20E-166// 345aa//89%//AF156603 BRAWH10000070 BRAWH10000370//UROKINASE PLASMINOGEN ACTIVATOR SURFACE RECEPTOR PRECURSOR (U-PAR) (CD87).//9.40E-08//155aa//29%//005588 BRAWH10000940//Xenopus laevis mRNA for Nfrl, complete cds.//6.10E-257//606aa//77%//D86491 BRAWH10001300 BRAWH10001620//Rattus norvegicus development-related protein mRNA, complete cds//1.90E-115//339aa//93%// AF045564 BRAWH10001640//Homo sapiens KRAB zinc finger protein (RITA) mRNA, complete cds.//5.10E-14//57aa//88%// BRAWH10001680//Homeotic protein emx2//9.60E-126//252aa//92%//151737

25

BRAWH10001740 BRAWH10001800

BRAWH20000340//TRP-185 protein//7.20E-28//68aa//97%//S62356

BRAWH20000480//Mus musculus kinesin motor protein KIFC2 mRNA, complete cds.//1.50E-120//270aa//85%// U92949

BRAWH20000930

5 BRAWH20001090//SARCALUMENIN PRECURSOR.//1.90E-05//363aa//24%//P13666

BRAWH20001770//SERINE HYDROXYMETHYLTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.1.2.1) (SERINE METHYLASE) (GLYCINE HYDROXYMETHYLTRANSFERASE) (SHMT).//3.20E-41//77aa//100%//P34897 BRAWH20002480

BRAWH20003230//Proline rich protein//2.00E-29//142aa//52%//CAA48321

10 BRAWH20004430//Human breast cancer, estrogen regulated LIV-1 protein (LIV-1) mRNA, partial cds.//1.00E-46// 164aa//46%//U41060

BRAWH20004760//Mus musculus mRNA for Eos protein, complete cds.//1.80E-92//180aa//92%//AB017615
BRAWH20005030//REGULATOR OF MITOTIC SPINDLE ASSEMBLY 1 (RMSA-1).//6.50E-18//103aa//52%//P49646
BRAWH20005220//Homo sapiens hD54+ins2 isoform (hD54) mRNA, complete cds.//1.20E-77//206aa//80%//

5 AF004430

BRAWH20005540

BRAWH20006330//Homo sapiens mRNA for zinc finger 2 (ZNF2 gene).//1.20E-120//214aa//98%//X60152 BRAWH20006510//HYDROXYMETHYLGLUTARYL-COA LYASE (EC 4.1.3.4) (HMG-COA LYASE)

(HL) (3- HYDROXY-3-METHYLGLUTARATE-COA LYASE).//1.60E-96//238aa//73%//P35915 BRAWH20006860// SERINE/THREONINE-PROTEIN KINASE SGK (EC 2.7.1.-)

(SERUM/GLUCOCORTICOID-REGULATED KINASE).//4.20E-223//406aa//99%//000141

BRAWH20006970

BRAWH20008660

BRAWH20008920

25 BRAWH20009010//Human (c-myb) gene, complete primary cds, and five complete alternatively spliced cds.//9.70E-28//105aa//59%//U22376

BRAWH20009440//Arabidopsis thaliana pollenless3 (178) gene, complete cds; beta-9 tubulin (TUB9) gene, partial cds; and unknown gene.//7.90E-31//271aa//34%//AF060248

BRAWH20009840//CYTOCHROME P450 2J2 (EC 1.14.14.1) (CYPIIJ2) (ARACHIDONIC ACID EPOXYGENASE).//

1.10E-146//273aa//98%//P51589

BRAWH20011030

BRAWH20011290//OCCLUDIN.//2.90E-07//174aa//29%//Q61146

BRAWH20011410//CUTICLE COLLAGEN 2.//2.30E-05//129aa//35%//P17656

BRAWH20011660//BETA-GALACTOSIDASE PRECURSOR (EC 3.2.1.23) (LACTASE) (ACID BETA- GALACTOSI-

35 DASE).//1.40E-105//421aa//49%//P16278

BRAWH20012030

BRAWH20014180//Homo sapiens double-stranded RNA specific adenosine deaminase (ADAR3) mRNA, complete cds.//3.60E-97//179aa//100%//AF034837

BRAWH20014380

40 BRAWH20014610

BRAWH20014840//POLYPEPTIDE N-ACETYLGALACTOSAMINYLTRANSFERASE (EC 2.4.1.41) (PROTEIN- UDP ACETYLGALACTOSAMINYLTRANSFERASE) (UDP-GALNAC:POLYPEPTIDE, N-ACETYLGALACTOSAMINYLTRANSFERASE) (GALNAC-T1).//4.50E-84//511aa//36%//Q07537
BRAWH20015030

45 BRAWH20036890//Mus musculus clone mouse1-9 putative protein phosphatase type 2C mRNA, partial cds.//2.70E-59//120aa//98%//AF117832

BRAWH20036930

BRAWH20038320

BRAWH20040950

50 BRAWH20047310

BRAWH20052250

BRAWH20059980//BONE MORPHOGENETIC PROTEIN 1 PRECURSOR (EC 3.4.24.-) (BMP-1).//8.60E-37//282aa//32%//P98070

BRAWH20060440

55 BRAWH20064500//Homo sapiens CAGF9 mRNA, partial cds.//8.00E-25//148aa//51%//U80736 BRAWH20064930

BRAWH20066220//DYNEIN GAMMA CHAIN, FLAGELLAR OUTER ARM.//3.20E-41//221aa//39%//Q39575 BRAWH20069600

BRAWH20069890//DNA-DIRECTED RNA POLYMERASE II LARGEST SUBUNIT (EC 2.7.7.6) (RPB1) (FRAGMENT).//9.50E-07//188aa//30%//P11414

BRAWH20074060

BRAWH20076050//LORICRIN.//2.80E-05//160aa//31%//P18165

5 BRAWH20087060

BRAWH20089030

BRAWH20089560//Protein-tyrosine-phosphatase (EC 3.1.3.48)

TD14//0//736aa//90%//T14355

BRAWH20092270

10 BRAWH20092610//TLM PROTEIN (TLM ONCOGENE).//3.90E-15//122aa//43%//P17408

BRAWH20093600

BRAWH20094850

CD34C20000510//Human chitotriosidase precursor mRNA, complete cds.//7.80E-247//366aa//98%//U29615 CTONG20003030

15 CTONG20005890//CHANNEL ASSOCIATED PROTEIN OF SYNAPSE-110 (CHAPSYN-110).//3.10E-18//241aa// 31%//Q15700

CTONG20007710

CTONG20008270

CTONG20011390

20 CTONG20013200//HYPOTHETICAL PROTEIN C2G11.15C IN CHROMOSOME I (FRAGMENT).//1.60E-15//130aa// 36%//Q09814

CTONG20013660//GLUGOAMYLASE S1/S2 PRECURSOR (EC 3.2.1.3) (GLUCAN 1,4-ALPHA-GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE).//5.00E-11//468aa//23%//P08640 CTONG20015330

25 CTONG20018200//Mus musculus NSD1 protein mRNA, complete cds.//0//1061aa//87%//AF064553

CTONG20019110//UBIQUITIN CARBOXYL-TERMINAL HYDROLASE 4 (EC 3.1.2.15)

(UBIQUITIN THIOLESTERASE 4) (UBIQUITIN-SPECIFIC PROCESSING PROTEASE 4)

(DEUBIQUITINATING ENZYME 4) (UBIQUITOUS NUCLEAR PROTEIN HOMOLOG).//5.40E-19//116aa//39%//Q13107

30 CTONG20019550//Homo sapiens mRNA for actin binding protein ABP620, complete cds.//0//1175aa//53%//AB029290 CTONG20020730

CTONG20021430

CTONG20024180//Homo sapiens scaffold attachment factor B (SAF-B) mRNA, partial cds.//3.10E-52//366aa//40%// L43631

35 CTONG20024530

CTONG20025580//ZINC FINGER PROTEIN 211 (ZINC FINGER PROTEIN C2H2-25).//2.00E-58//223aa//45%//

CTONG20027210//VACUOLAR PROTEIN SORTING-ASSOCIATED PROTEIN VPS13.//7.90E-06//224aa//24%//Q07878

40 CTONG20028030

CTONG20028160//Homo sapiens cadherin-like protein VR20 mRNA, partial cds.//9.70E-170//290aa//100%//AF169690

CTONG20028200//Mus musculus MGA protein mRNA, complete cds.//0//1132aa//85%//AF205935 CTONG20029650

45 CTONG20037820//GAMMA-AMINOBUTYRIC-ACID RECEPTOR PI SUBUNIT PRECURSOR (GABA(A) RECEPTOR).//4.30E-94//164aa//93%//000591

CTONG20047160//Rattus norvegicus mRNA for seven transmembrane receptor, complete cds.//1.10E-26//319aa// 29%//AB019120

CTONG20055530//ANKYRIN 2 (BRAIN ANKYRIN) (ANKYRIN B) (ANKYRIN, NONERYTHROID).//1.90E-59//598aa//30%//Q01484

CTONG20064490//Drosophila melanogaster 26S proteasome regulatory complex subunit p42A mRNA, complete cds.//1.00E-41//108aa//77%//AF145308

D30ST20001840//RNA binding motif protein 9 [Homo sapiens].//1.00E-139//297aa//91%//NP\_055124

DFNES20002120//Mus musculus tgt mRNA for tRNA-guanine transglycosylase, complete cds.//1.40E-62//140aa//83%//AB034632

DFNES20002680//MYOSIN HEAVY CHAIN, STRIATED MUSCLE.//9.00E-26//620aa//24%//P24733 DFNES20002920

DFNES20003350//CELL SURFACE GLYCOPROTEIN 1 PRECURSOR (OUTER LAYER PROTEIN B) (S-LAYER

PROTEIN 1).//5.30E-05//277aa//25%//Q06852

DFNES20004320//Homo sapiens ubiquitous TPR-motif protein Y isoform (UTY) gene, partial cds; alternatively spliced.//3.20E-15//85aa//50%//AF265575

FCBBF10005980//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//3.20E-151//395aa//57%//P51523

5 FCBBF10006180

FCBBF10006750

FCBBF10006860

FCBBF10006870//Mus musculus Rap2 interacting protein 8 (RPIP8) mRNA, complete cds.//3.10E-113//456aa//53%// U73941

10 FCBBF10006910

FCBBF10007320

FCBBF10007600

FCBBF20000940//MONOCYTIC LEUKEMIA ZINC FINGER PROTEIN (ZINC FINGER PROTEIN 220).//2.70E-05// 194aa//28%//Q92794

15 FCBBF20001050

FCBBF20001950

FCBBF20002320

FCBBF20002760//ALPHA SCRUIN.//2.70E-05//214aa//24%//Q25390

FCBBF20005760

FCBBF20005910//KINESIN LIGHT CHAIN (KLC).//6.40E-10//114aa//39%//P46825

FCBBF20006770

FCBBF20007330//DIPEPTIDYL PEPTIDASE IV LIKE PROTEIN (DIPEPTIDYL

AMINOPEPTIDASE- RELATED PROTEIN) (DIPEPTIDYLPEPTIDASE VI) (DPPX-L/DPPX-S).//1.70E-19//96aa//45%//P46101

25 FCBBF20008080

FCBBF20008150//ZYXIN.//7.60E-57//350aa//34%//004584

FCBBF20009400

FCBBF20009510//ZINC FINGER PROTEIN 7 (ZINC FINGER PROTEIN KOX4) (ZING FINGER PROTEIN HF.16).// 2.30E-76//225aa//43%//P17097

FCBBF20012110//Leishmania major partial ppgl gene for proteophosphoglycan.//3.50E-05//256aa//24%//AJ243460 FCBBF20012990

FCBBF20014800

FCBBF20015380//Homo sapiens long chain polyunsaturated fatty acid elongation enzyme (HEL01) mRNA, complete cds. //7. 00E-61//319aa//44%//AF231981

35 FCBBF20016720

FCBBF20017180

FCBBF20017200

FCBBF40002820//ELECTRON TRANSFER FLAVOPROTEIN BETA-SUBUNIT (BETA-ETF).//3.60E-121//239aa//99%//P38117

40 FCBBF50002610//ZINC FINGER PROTEIN 35 (ZFP-35).//1.40E-137//489aa//50%//P15620

FEBRA20000350//Mus musculus MAST205 protein kinase mRNA, complete cds.//6.20E-71//190aa//76%//U02313 FEBRA20000530//Drosophila melanogaster Diablo (dbo) mRNA, complete cds.//6.40E-58//495aa//32%//AF237711 FEBRA20001050//KINESIN LIGHT CHAIN (KLC).//4.20E-207//566aa//69%//007866

FEBRA20001290//PROBABLE TRNA (5-METHYLAMINOMETHYL-2-THIOURIDYLATE)-METHYLTRANSFERASE

45 (EC 2.1.1.61).//4.60E-43//82aa//100%//075648

FEBRA20003110//Homo sapiens UDP-GlcNAc:a-3-D-mannoside b1,2-N-acetylglucosaminyltransferase I.2 (MGAT1.2) mRNA, partial cds.//3.80E-92//172aa//98%//AF250859

FEBRA20003300

FEBRA20003770//Homo sapiens ankyrin repeat-containing protein (CCM1) mRNA, complete cds.//0//406aa//100%// AF296765

FEBRA20003780

FEBRA20003910

FEBRA20003970//ZINC FINGER PROTEIN 228.//1.60E-118//423aa//52%//Q9UJU3

FEBRA20003990//ZINC FINGER PROTEIN 45 (BRC1744).//4.60E-130//502aa//50%//Q02386

55 FEBRA20004040

FEBRA20004150//DRA PROTEIN (DOWN-REGULATED IN ADENOMA).//2.70E-30//150aa//37%//P40879 FEBRA20004520

FEBRA20004540//ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1).//2.40E-252//425aa//99%//P51522

FEBRA20004910

FEBRA20005360//Homo sapiens paraneoplastic cancer-testis-brain antigen (MA5) mRNA, complete cds.//5.50E-75//375aa//44%//AF083116

FEBRA20006560

5 FEBRA20006800

FEBRA20006900

FEBRA20007330//45 KDA CALCIUM-BINDING PROTEIN PRECURSOR (STR0MA CELL-DERIVED FACTOR 4) (SDF-4).//3.30E-63//117aa//94%//061112

FEBRA20007400

10 FEBRA20007570//Homo sapiens BM-009 mRNA, complete cds.//1.30E-59//189aa//66%//AF208851

FEBRA20007710

FEBRA20007720//Mus musculus strain ICR 90 kDa actin-associated protein palladin mRNA, partial cds.//8.10E-06// 144aa//29%//AF205079

FEBRA20007870//Homo sapiens putative transcription factor CR53 (CR53) mRNA, partial cds.//6.60E-79//144aa//

15 100%//AF017433

FEBRA20008090

FEBRA20008560//HYPOTHETICAL 40.9 KDA PROTEIN C08B11.5 IN CHROMOSOME II.//4.30E-05//91aa//31%// Q09442 FEBRA20008740

FEBRA20008800//SARCALUMENIN PRECURSOR.//2.10E-07//199aa//30%//P13666 FEBRA20008810//ACTIN 6 (FRAGMENT).//1.00E-103//369aa//50%//P53459

FEBRA20009010

FEBRA20009590

FEBRA20009720//ZINC FINGER PROTEIN 184 (FRAGMENT).//2.30E-145//514aa//51%//Q99676

FEBRA20010930//MONOCARBOXYLATE TRANSPORTER 4 (MCT 4).//9.00E-22//333aa//28%//015374

25 FEBRA20011330//26S PROTEASOME REGULATORY SUBUNIT S3 (PROTEASOME SUBUNIT P58).//2.10E-54//113aa//100%//043242

FEBRA20011460//ZINC FINGER PROTEIN 174 (AW-1).//1.90E-12//60aa//55%//Q15697

FEBRA20011970

FEBRA20012270

30 FEBRA20012450//NAG14//4.90E-24//399aa//27%//AF196976

FEBRA20012940

FEBRA20013510

FEBRA20014870

FEBRA20014920//Mus musculus pecanex 1 mRNA, complete cds.//6.50E-120//313aa//72%//AF096286

FEBRA20015840//DELTA-LIKE PROTEIN PRECURSOR (DLK) (PREAD1POCYTE FACTOR 1) (PREF-1) (ADI-POCYTE DIFFERENTIATION INHIBITOR PROTEIN) [CONTAINS: FETAL ANTIGEN 1 (FA1)].//2.90E-64//323aa// 39%//Q09163

FEBRA20015900

FEBRA20015910

40 FEBRA20017060//Human APEG-1 mRNA, complete cds.//7.10E-57//113aa//100%//U57099

FEBRA20017150//ZINC-BINDING PROTEIN A33.//4.00E-10//322aa//21%//Q02084 FEBRA20017900//Xenopus laevis RRM-containing protein SEB-4 mRNA, complete cds.//1.20E-79//180aa//88%//AF223427

FEBRA20019890//HYPOTHETICAL PROTEIN KIAA0167.//1.70E-180//339aa//56%//Q99490

FEBRA20020860

45 FEBRA20021910

FEBRA20021940

FEBRA20024290

FEBRA20024420//Homo sapiens partial mRNA for choline dehydrogenase (chdh gene).//1.10E-71//143aa//98%//A.1272267

50 FEBRA20025250//HYPOTHETICAL 73.0 KDA PROTEIN IN CLA4-PUS4 INTERGENIC REGION.//1.40E-09//172aa// 29%//P48566

FEBRA20027270

FEBRA20027830

FEBRA20028820

5 FEBRA20028970

FEBRA20029080

FEBRA20030540//Halocynthia roretzi mRNA for HrPET-1, complete cds.//2.80E-25//155aa//34%//AB029334 FEBRA20031550

FEBRA20033080

FEBRA20034290//RESTIN (CYTOPLASMIC LINKER PROTEIN-170) (CLIP-170).//6.90E-21//87aa//51%//042184 FEBRA20037070

FEBRA20041100//PHOSPHOLIPASE ADRAB-B PRECURSOR (EC 3.1.-.-).//1.10E-119//259aa//83%//Q05017

5 FEBRA20041910

FEBRA20042240

FEBRA20042370

FEBRA20042930

FEBRA20043250//Canis familiaris mRNA for C3VS protein.//1.90E-191//589aa//66%//X99145

10 FEBRA20043290//MYOSIN HEAVY CHAIN, CARDIAC MUSCLE ISOFORM (FRAGMENT).//0//975aa//65%//P29616 FEBRA20044120

FEBRA20044430

FEBRA20044900//R.norvegicus mRNA for CPG2 protein.//8.60E-244//509aa//89%//X95466

FEBRA20045920//Homo sapiens mRNA for putative sialoglycoprotease type 2.//5.70E-187//273aa//98%//AJ295148

15 FEBRA20048180//DRR1 PROTEIN (TU3A PROTEIN).//8.80E-58//131aa//87%//095990

FEBRA20050140//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//4.40E-125//505aa//45%//P51523 FEBRA20050790//PROTEIN-TYROSINE PHOSPHATASE STRIATUM-ENRICHED (EC 3.1.3.48)

(STEP) (NEURAL-SPECIFIC PROTEIN-TYROSINE PHOSPHATASE) (FRAGMENT).//3.60E-66//149aa//83%//P54829

FEBRA20052160//PUTATIVE GLUTAMINE-DEPENDENT NAD(+) SYNTHETASE (EC 6.3.5.1) (NAD(+) SYNTHASE [GLUTAMINE-HYDROLYSING]).//6.50E-33//105aa//64%//P38795

FEBRA20053770

FEBRA20053800//Homo sapiens ubiquitous TPR-motif protein Y isoform (UTY) gene, partial cds; alternatively spliced.//3.20E-08//65aa//49%//AF265575

25 FEBRA20054270

FEBRA20057260

FEBRA20057520

FEBRA20057780//INTEGUMENTARY MUCIN A.1 PRECURSOR (FIM-A.1) (PREPROSPASMOLYSIN).//2.40E-07// 120aa//27%//P10667

FEBRA20057880//LIM domain only 7 isoform c [Homo sapiens]//1.20E-287//545aa//99%//NP\_056667 FEBRA20059980

FEBRA20060920//SEGMENT POLARITY PROTEIN DISHEVELLED.//6.60E-15//84aa//41%//P51140 FEBRA20061500

FEBRA20062700//PUTATIVE novel haloacid dehalogenase-like hydrolase family protein similar to (archaea) bacterial proteins) [Homo sapiens].//0//209aa//100%//CAB43550

FEBRA20063150//Homo sapiens topoisomerase II alpha-4 (TOP2A) mRNA, partial cds.//8.20E-22//73aa//73%// AF285159

FEBRA20063540

FEBRA20064760//ZINC FINGER PROTEIN 184 (FRAGMENT).//2.10E-182//547aa//54%//Q99676

40 FEBRA20066270

FEBRA20066670

FEBRA20067360//HYPOTHETICAL ZING FINGER PROTEIN KIAA0961.//7.00E-134//472aa//54%//Q9Y2G7 FEBRA20067930//PERSEPHIN PRECURSOR (PSP).//7.90E-23//50aa//100%//060542 FEBRA20068730//Trg protein//1.00E-82//560aa//37%//160486

45 FEBRA20069420//ZINC FINGER PROTEIN 33A (ZINC FINGER PROTEIN KOX31) (KIAA0065) (HA0946) (FRAG-MENT).//3.60E-103//284aa//58%//Q06730

FEBRA20070170//Homo sapiens TRAF4-associated factor 2 mRNA, partial cds.//1.40E-87//220aa//75%//U83194 FEBRA20072000//MYOSIN II HEAVY CHAIN, NON MUSCLE.//3.00E-08//645aa//21%//P08799

FEBRA20072800//Human (c-myb) gene, complete primary cds, and five complete alternatively spliced cds.//4.10E-

50 30//97aa//74%//U22376

FEBRA20074140

FEBRA20074580

FEBRA20075510//RAS-RELATED PROTEIN RAB-6.//1.00E-36//88aa//88%//P20340

FEBRA20075660//REGU OF MITOTIC SPINDLE ASSEMBLY 1 (RMSA-1).//6.00E-09//84aa//46%//P49646

55 FEBRA20076220

HCASM10000210//Plasmodium berghei strain NYU2 merozoite surface protein-1 mRNA, partial cds.//1.50E-08// 122aa//28%//AF000413

HCASM10000610//HYPOTHETICAL 63.9 KD PROTEIN C1F12.09 IN CHROMOSOME I.//2.80E-14//116aa//31%//

Q10351

HCASM10001150

HCASM20002020

HCASM20002140//G1/S-SPECIFIC CYCLIN D3.//8.90E-118//226aa//99%//P30281

5 HCASM20003070

HCASM20005340

HCASM20005360//Macrophage migration inhibitory factor//2.50E-17//45aa//100%//XP\_000858

HEART20000350//Transacylases//7.50E-35//267aa//35%//AAB94954

HEART20000990

10 HEART20003090//PTB-ASSOCIATED SPLICING FACTOR (PSF).//3.70E-07//143aa//30%//P23246

HEART20004110

HEART20004480//TROPONIN T, CARDIAC MUSCLE ISOFORMS (TNTC).//2.80E-39//81aa//98%//P45379

HEART20004920

HEART20005060//ENAMELIN (TUFTELIN).//1.60E-23//215aa//30%//P27628 HEART20005200//ANKYRIN 1//5.00E-

15 24//250aa//37%//P16157

HEART20005680

HHDPC20000550//ADENYLATE KINASE, CHLOROPLAST (EC 2.7.4.3) (ATP-AMP

TRANSPHOSPHORYLASE).//1.60E-14//201aa//24%//P43188

HHDPC20000950//Cricetulus griseus layilin mRNA, complete cds.//8.00E-177//373aa//84%//AF093673

20 HHDPC20001150//Mus musculus putative secreted protein ZSIG37 (Zsig37) mRNA, complete cds.//2.00E-91//199aa// 83%//AF192499

HHDPC20001490//Mus musculus partial mRNA for muscle protein 534 (mg534 gene).//2.10E-80//167aa//88%//AJ250189

HHDPC20003150

25 HHDPC20004550//H.sapiens PTPL1 mRNA for protein tyrosine phosphatase.//3.60E-32//371aa//26%//X80289

HHDPC20004560

HHDPC20004620

HLUNG10000240

HLUNG10000300

30 HLUNG10000370

HLUNG10000640//KARYOGAMY PROTEIN KAR4.//2.20E-27//324aa//27%//P25583

HLUNG10000760//Mus musculus mRNA for mSox7, complete cds.//9.90E-186//388aa//87%//AB023419

HLUNG10000990//TRICHOHYALIN.//7.00E-06//454aa//21%//P22793

HLUNG10001050//MYOTUBULARIN.//4.60E-12//95aa//37%//Q13496

35 HLUNG10001100//PISTIL-SPECIFIC EXTENSIN-LIKE PROTEIN PRECURSOR (PELP).//6.20E-06//117aa//30%// O03211

HLUNG20000680//ZINC FINGER PROTEIN 157.//6.30E-104//443aa//45%//P51786 HLUNG20001160//AIG1 PROTEIN.//3.10E-24//271aa//28%//P54120

HLUNG20001250

40 HLUNG20001420//Mus musculus putative thymic stromal co-transporter TSCOT mRNA, complete cds.//1.20E-189// 478aa//766//AF148145

HLUNG20001760

HLUNG20002550//MAST CELL TRYPTASE PRECURSOR (EC 3.4.21.59).//1.10E-43//178aa//47%//P50342

HLUNG20003140

45 HLUNG20004120

HLUNG20004800

HLUNG20005010

HSYRA10001190//PROBABLE GYP7 PROTEIN (FRAGMENT).//7.90E-08//157aa//25%//P09379

HSYRA10001370//ZINC FINGER PROTEIN 184 (FRAGMENT).//1.70E-149//556aa//50%//Q99676

50 HSYRA10001480

HSYRA10001680//HYPOTHETICAL HELICASE C28H8.3 IN CHROMOSOME III.//9.30E-61//540aa//32%//Q09475 HSYRA10001780

HSYRA20001350//CELL POLARITY PROTEIN TEA1.//9.10E-16//211aa//28%//P87061

HSYRA20002480

55 HSYRA20002530

HSYRA20003470

HSYRA20005100//NAM7 PROTEIN (NONSENSE-MEDIATED MRNA DECAY PROTEIN 1) (UP-FRAMESHIFT SUP-PRESSOR 1).//6.70E-31//374aa//31%//P30771

HSYRA20006050//MYOSIN HEAVY CHAIN, CLONE 203 (FRAGMENT).//3.40E-11//282aa//20%//P39922

HSYRA20006290//SKIN SECRETORY PROTEIN XP2 PRECURSOR (APEG PROTEIN).//2.10E-07//168aa//30%//P17437

HSYRA20006400//Homo sapiens FRG1 mRNA, complete cds.//1.00E-50//112aa//91%//L76159

5 HSYRA20007600

HSYRA20008280

HSYRA20011030

HSYRA20011530

HSYRA20013320//INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 3 PRECURSOR (IGFBP-3) (IBP-3)

(IGF-BINDING PROTEIN 3).//1.60E-130//236aa//99%//P17936

HSYRA20014200

HSYRA20014760

HSYRA20015740//GLUCOSAMINE-6-PHOSPHATE ISOMERASE (EC 5.3.1.10) (GLUCOSAMINE-6- PHOSPHATE DEAMINASE) (GNPDA) (GLCN6P DEAMINASE) (OSCILLIN).//1.70E-133//274aa//87%//Q64422

15 HSYRA20015800

HSYRA20016210

HSYRA20016310//ZINC FINGER PROTEIN 138 (FRAGMENT).//3.80E-136//237aa//100%//P52744

IMR3210000440//Human transmembrane receptor precursor (PTK7) mRNA, complete cds.//1.60E-208//388aa//99%//

20 IMR3210000740

IMR3210000750

IMR3210001580//Cricetulus griseus layilin mRNA, complete cds.//2.30E-177//373aa//84%//AF093673 IMR3210001650

IMR3210002420//ZINC FINGER PROTEIN 33A (ZINC FINGER PROTEIN KOX31) (KIAA0065) (HA0946) (FRAGMENT). //3, 80E-81//281aa//47%//Q06730

IMR3210002660//ZINC/CADMIUM RESISTANCE PROTEIN.//2.50E-10//148aa//25%//P20107

IMR3220002230//HINT PROTEIN (PROTEIN KINASE C INHIBITOR 1) (PKCI-1) (17 KD

INHIBITOR OF PROTEIN KINASE C).//7.90E-08//97aa//32%//P16436

IMR3220003020//Mus musculus shd mRNA, complete cds.//3.80E-138//337aa//77%//AB018423

30 IMR3220006090

IMR3220007420//HYPOTHETICAL ZINC FINGER PROTEIN ZK686.4 IN CHROMOSOME III.//5.50E-50//211aa//48%//P34670

IMR3220007750//FOLLISTATIN-RELATED PROTEIN PRECURSOR (TGF-BETA-INDUCIBLE PROTEIN TSC-36).// 3.60E-19//229aa//30%//Q62356

JIMR3220007910//SYNAPSINS IA AND IB (BRAIN PROTEIN 4.1).//5.00E-07//167aa//31%//P17600
IMR3220008380//METHIONYL-TRNA FORMYLTRANSFERASE, MITOCHONDRIAL PRECURSOR (EC 2.1.2.9)

(MTFMT) (FRAGMENT).//1.10E-147//301aa//90%//077480 IMR3220008590

IMR3220008630//PUTATIVE SPLICING FACTOR, ARGININE/SERINE-RICH 2 (SPLICING

40 FACTOR SC35) (SC-35) (SPLICING COMPONENT, 35 KD).//3.50E-05//98aa//40%//009511

IMR3220009190//METHIONINE AMINOPEPTIDASE 2 (EC 3.4.11.18) (METAP 2)

(PEPTIDASE M 2) (INITIATION FACTOR 2 ASSOCIATED 67 KD GLYCOPROTEIN) (P67).//1.90E-230//418aa//92%// 008663

IMR3220009350

45 IMR3220009530

IMR3220009730//DNA43 PROTEIN.//6.20E-13//367aa//23%//P32354

IMR3220009840

IMR3220011850

IMR3220012180//Mus musculus pseudouridine synthase 3 (Pus3) mRNA, complete cds.//3.10E-221//483aa//84%//

50 AF26650

IMR3220013170//Homo sapiens mRNA for protein phosphatase, complete cds.//9.10E-41//195aa//48%//AB027004 IMR3220013320//NEUROFILAMENT TRIPLET M PROTEIN (160 KD NEUROFILAMENT PROTEIN) (NF-M).//5.10E-08//357aa//22%//P08553

IMR3220014350//HYPOTHETICAL PROTEIN KIAA0025.//9.70E-60//408aa//37%//Q15011

55 IMR3220014910//Rattus norvegicus tricarboxylate carrier-like protein mRNA, complete cds. //3. 90E-43//137aa//57%// AF276997

IMR3220016000

IMR3220017240

KIDNE10000080//Xenopus laevis alpha-1 collagen type II' mRNA, complete cds.//8.60E-07//244aa//29%//M63596

KIDNE10000280

KIDNE10000500

KIDNE10001040//SYNTAXIN 7.//1.10E-32//249aa//32%//015400

5 KIDNE10001430

KIDNE10001450

KIDNE10001520//Mus musculus yolk sac permease-like molecule 1 (YSPL-1) mRNA, complete cds.//6.40E-73//159aa//77%//U25739

KIDNE20000410//ALANINE--GLYOXYLATE AMINOTRANSFERASE 2 PRECURSOR (EC 2.6.1.44) (AGT 2) (BE-

TA-ALANINE-PYRUVATE AMINOTRANSFERASE) (BETA-ALAAT II).//1.00E-71//167aa//85%//Q64565

KIDNE20000510//ZINC FINGER PROTEIN 133.//5.10E-156//503aa//56%//P52736

KIDNE20000700

KIDNE20000850

KIDNE20001670//Mus musculus mRNA for RST, complete cds.//6.80E-123//331aa//72%//AB005451

15 KIDNE20001920

KIDNE20002440

KIDNE20002450

KIDNE20002660

KIDNE2000315Q//AQUAPORIN-7 LIKE (AOUAPORIN ADIPOSE) (AQPAP).//1.80E-44//95aa//92%//014520

KIDNE20003300/lkaros-like protein//1.50E-45//160aa//41%//AAC34387

KIDNE20003490//Mus musculus putative lysophosphatidic acid acyltransferase mRNA, complete cds.//6.10E-124//291aa//77%//AF015811

KIDNE20003750//Mus musculus mRNA for granuphilin-a, complete cds.//1.30E-31//173aa//42%//AB025258 KIDNE20004030

25 KIDNE20004220//Homo sapiens topoisomerase II alpha-4 (T0P2A) mRNA, partial cds.//3.70E-21//76aa//72%// AF285159

KIDNE20004970//TRICHOHYALIN.//1.50E-06//244aa//27%//P37709

KIDNE20005130//ALANINE--GLYOXYLATE AMINOTRANSFERASE 2 PRECURSOR (EC 2.6.1.44) (AGT 2) (BE-TA-ALANINE-PYRUVATE AMINOTRANSFERASE) (BETA-ALAAT II).//1.30E-153//337aa//84%//Q64565

39 KIDNE20005170//HYPOTHETICAL 49.1 KD PROTEIN C11D3.06 IN CHROMOSOME I.//2.20E-30//247aa//31%// Q10085

KIDNE20005190//TONB PROTEIN.//2.60E-08//93aa//34%//006432

KIDNE20005740//Staphylococcus epidermidis putative cell-surface adhesin SdrF (sdrF) gene, complete cds.//3.10E-34//372aa//28%//AF245041

35 KIDNE20031850//Ras association (RaIGDS/AF-6) domain family 2; KIAA0168 gene product [Homo sapiens]//4.00E-66//250aa//59%//NP\_055552

KIDNE20033050//PUTATIVE AMIDASE AF1954 (EC 3.5.1.4).//8. 30E-34//242aa//32%//028325

KIDNE20033350

KIDNE20033570

40 KIDNE20033730//Homo sapiens Asef mRNA for APC-stimulated guanine nucleotide exchange factor, complete cds.// 3.90E-184//572aa//61%//AB042199

KIDNE20033770

KIDNE20037520

KIDNE20039410//HYPOTHETICAL 37.2 KDA PROTEIN C12C2.09C IN CHROMOSOME II.//3.20E-19//209aa//22%//

45 Q09749

KIDNE20039940//ZINC FINGER PROTEIN 191.//1.40E-82//308aa//56%//014754

KIDNE20040340

KIDNE20040540

KIDNE20040840//Morone saxatilis myosin heavy chain FM3A (FM3A) mRNA, complete cds.//0//1135aa//64%//

60 AF003249

KIDNE20042620

KIDNE20042940

KIDNE20042950//Human mRNA for prepro-alpha2(I) collagen (COL1A2).//1.40E-05//96aa//37%//Y00724

KIDNE20043440//Vacuolar protein sorting-associated protein - fission yeast//9.00E-34//400aa//33%//T39106

KIDNE20044110//Homo sapiens vacuolar proton pump 116 kDa accessory subunit

(ATP6N1B) mRNA, complete cds, alternatively spliced.//3.80E-278//322aa//91%//AF245517

KIDNE20045200

KIDNE20045340

KIDNE20045790

KIDNE20046810//Mus musculus peroxisomal long chain acyl-CoA thioesterase lb (Pte1b) gene, exon 3 and complete cds.//2.80E-87//219aa//73%//AF180801

KIDNE20048280//Mus musculus orphan transporter isoform A12 (Xtrp2) mRNA,

alternatively spliced, complete cds.//2.70E-265//600aa//76%//AF075262

KIDNE20048640

KIDNE20048790

KIDNE20049810

KIDNE20050420//LYSOSOMAL TRAFFICKING REGULATOR (BEIGE HOMOLOG).//5.00E-97//283aa//50%//Q99698

KIDNE20052960//ACTIN, CYTOPLASMIC 1 (BETA-ACTIN).//2.70E-16//68aa//67%//P12714

KIDNE20053360//Homo sapiens antigen NY-CO-31 (NY-CO-31) mRNA, partial cds.//6.40E-12//66aa//54%//AF039697

KIDNE20054000

KIDNE20054770//Drosophila melanogaster minidiscs (mnd) mRNA, complete cds.//4.80E-69//474aa//34%//AF139834

KIDNE20056290//Bos taurus mRNA for mitochondrial aralkyl acylCoA:amino acid N-acyltransferase.//6.40E-58// 297aa//40%//AJ223301

KIDNE20056760//NEURONAL PROTEIN.//6.50E-44//118aa//75%//P41737

KIDNE20059080//Plakophilin 4 [Homo sapiens].//0//669aa//98%//NP\_003619

KIDNE20059370

KIDNE20060140//Rattus norvegicus selective LIM binding factor mRNA, complete cds.//1.30E-255//339aa//94%// AF226993

KIDNE20060300//Gallus gallus syndesmos mRNA, complete cds.//3.10E-42//149aa//62%//AF095446

KIDNE20060530//Mus musculus mRNA for acetylglucosaminyltransferase-like protein.//3.70E-252//633aa//69%// AJ006278

25 KIDNE20060620

KIDNE20061490//Xenopus laevis RING finger protein mRNA, complete cds.//6.80E-19//136aa//40%//U63817 KIDNE20062480

KIDNE20062990//B0B1 PROTEIN (BEM1-BINDING PROTEIN).//8.00E-06//332aa//22%//P38041 KIDNE20063530

30 KIDNE20063760//GAMMA-GLUTAMYLTRANSPEPTIDASE 1 PRECURSOR (EC 2.3.2.2) (GAMMA-GLUTAMYL-TRANSFERASE 1).//7.70E-20//62aa//83%//P19440

KIDNE20066520

KIDNE20067600//PROSTAGLANDIN F2-ALPHA RECEPTOR REGULATORY PROTEIN PRECURSOR (PROSTAGLANDIN F2-ALPHA RECEPTOR ASSOCIATED PROTEIN).//1.90E-23//293aa//26%//Q62786

35 KIDNE20067750//Homo sapiens PTOV1 (PTOV1) gene, complete cds.//7.60E-62//283aa//53%//AF238381 KIDNE20068800//ACTIN INTERACTING PROTEIN 2.//4.60E-33//143aa//51%//P46681

KIDNE20070050

KIDNE20070770

KIDNE20071860

40 KIDNE20073280//L.mexicana Imsap2 gene for secreted acid phosphatase 2 (SAP2).//3.30E-05//365aa//23%//Z46970 KIDNE20073520//GLUCOAMYLASE S1/S2 PRECURSOR (EC 3.2.1.3) (GLUCAN 1,4-ALPHA-GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE).//3.00E-15//536aa//23%//P08640

KIDNE20073560

KIDNE20074220

45 KIDNE20075690//CLAUDIN-10 (OSP LIKE PROTEIN).//6.60E-90//224aa//77%//P78369

KIDNE20078100//DEOXYURIDINE 5'-TRIPHOSPHATE NUCLEOTIDOHYDROLASE (EC 3.6.1.23) (DUTPASE) (DUTP PYROPHOSPHATASE).//7.80E-16//100aa//44%//041033

KIDNE20078110//ZING FINGER PROTEIN 202.//3.10E-67//427aa//40%//095125

LIVER10000580

50 LIVER10000670//UROCANATE HYDRATASE (EC 4.2.1.49) (UROCANASE) (IMIDAZOLONEPROPIONATE HYDRO-LASE).//1.50E-87//380aa//35%//P53385

LIVER10000790//Rattus norvegicus fertility related protein WMP1 mRNA, complete cds.//2.70E-82//254aa//65%// AF094609

LIVER10000990

55 LIVER10001040//Rattus norvegicus kidney-specific protein (KS) mRNA, complete cds.//6.00E-149//333aa//79%// AF062389

LIVER10001110

LIVER10001750

LIVER10002300//NADH-UBIOUINONE OXIDOREDUCTASE 51 KD SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-51KD) (CI-51KD).//1.80E-99//183aa//100%//P49821 LIVER10002780

LIVER10003030

LIVER10004330//Homo sapiens mRNA for neuropathy target esterase.//1.30E-256//710aa//68%//AJ004832 LIVER10005420//Mus musculus TAGL-alpha mRNA, complete cds.//1.20E-204//373aa//76%//AF149837 LIVER20000330//TUMOR NECROSIS FACTOR, ALPHA-INDUCED PROTEIN 1, ENDOTHELIAL (B12 PROTEIN).// 1.80E-10//193aa//27%//Q13829

LIVER20000370//ALPHA-1B-GLYCOPROTEIN.//5.00E-159//304aa//96%//P04217

LIVER20004160

LIVER20004460

LIVER20005150

MAMGL10000320

MAMGL10000350

MAMGL10000560

MAMGL10001780//PUTATIVE PRE-MRNA SPLICING FACTOR RNA HELICASE (DEAH BOX PROTEIN 15) (ATP-DEPENDENT RNA HELICASE #46),//2.10E-80//166aa//92%//043143 MAMGL10001820//SEGMENT POLARITY PROTEIN DISHEVELLED.//1.10E-12//84aa//41%//P51140 MAMGL10001840

MESAN10000350//MAJOR SURFACE-LABELED TROPHOZOITE ANTIGEN PRECURSOR.//2.10E-06//179aa// 29%//P21849

MESAN10001010//Rat trg gene product//6.00E-94//600aa//36%//I60486

MESAN10001470

MESAN10001800//BB1=malignant cell expression-enhanced gene/tumor progression-enhanced gene [human,

UM-UC-9 bladder carcinoma cell line, mRNA, 1897 nt].//1.60E-162//348aa//87%//S82470

MESAN20000920//Guanylate kinase-interacting protein 1 Maguin-1, membrane-associated//7.60E-155//477aa//62%// T18293

MESAN20001490//HYPOTHETICAL 175.8 KD PROTEIN IN GND1-IKI1 INTERGENIC REGION.//6.70E-163//346aa// 58%//P38873

MESAN20002670

MESAN20002910//HISTIDYL-TRNA SYNTHETASE (EC 6.1.1.21) (HISTIDINE-TRNA LIGASE) (HISRS).//3.60E-98//202aa//96%//P12081

MESAN20003370

MESAN20005010//Homo sapiens DNA cytosine methyltransferase 3 alpha (DNMT3A) mRNA, complete cds.//6.60E-09//95aa//33%//AF067972

NB9N410000470//Homo sapiens NY-REN-45 antigen mRNA, complete cds.//9.70E-247//250aa//99%//AF155110 NR9N410001210

NB9N410001350//RAS-RELATED PROTEIN RAB-1A (YPT1-RELATED PROTEIN).//1.00E-70//109aa//100%// P11476

NB9N410001460

NB9N420000420

NB9N420001040//Mus musculus Shc binding protein (mPAL) mRNA, complete cds.//4.40E-286//672aa//77%//

NB9N420004950//PROBABLE NUCLEAR ANTIGEN.//5.00E-05//246aa//31%//P33485

NESOP10000870//HOMEOBOX PROTEIN SAX-1 (CHOX-3) (FRAGMENT).//1.70E-05//88aa//38%//P19601 NHNPC10000840//Homo sapiens poly-U binding splicing factor PUF60 (PUF60) mRNA, partial cds.//6.80E-196// 380aa//99%//AF190744

NHNPC10001010

NHNPC10001240//PAIRED MESODERM HOMEOBOX PROTEIN 2A (PAIRED-LIKE HOMEOBOX 2A) (PHOX2A HOMEODOMAIN PROTEIN).//8.00E-05//109aa//28%//Q62066 NHNPC20002060//Bovine viral diarrhea virus type 2 strain BVDV2-SD1630c polyprotein gene, partial cds.//8.70E-77//153aa//92%//AF268178

NHNPC20002120//ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1).//2.20E-130//357aa//63%//P51522 NT2NE10000040

NT2NE10000140//Schizosaccharomyces pombe caffeine-induced death protein 1 (cid1)mRNA, complete cds.//1.00E-31//350aa//29%//AF105076

NT2NE10000180//SUPPRESSOR PROTEIN SRP40.//2.50E-06//219aa//23%//P32583

NT2NE10000230

NT2NE10000630//Gallus gallus Dach2 protein (Dach2) mRNA, complete cds.//1.90E-147//194aa//78%//AF198349

NT2NE10000730//RAB GERANYLGERANYLTRANSFERASE ALPHA SUBUNIT (EC 2.5.1.-) (RAB GERANYL-GERANYLTRANSFERASE ALPHA SUBUNIT) (RAB GG TRANSFERASE) (RAB

GGTASE).//3.30E-07//142aa//33%//Q92696

NT2NE10000830//POSSIBLE GUSTATORY RECEPTOR CLONE PTE01 (FRAGMENT).//2.40E-56//182aa//62%// P35894

NT2NE10001200

NT2NE10001630

NT2NE10001850//UDP-N-ACETYLGLUCOSAMINE-PEPTIDE N-ACETYLGLUCOSAMINYLTRANSFERASE 110 KDA SUBUNIT (EC 2.4.1.-) (O-GLCNAC TRANSFERASE P110 SUBUNIT).//6.80E-30//395aa//28%//P56558

10 NT2NE20000380

NT2NE20000560

NT2NE20000640

NT2NE20001740

NT2NE20002140//DUAL SPECIFICITY PROTEIN PHOSPHATASE 8 (EC 3.1.3.48) (EC

3.1.3.16) (NEURONAL TYROSINE THREONINE PHOSPHATASE 1).//1.00E-131//487aa//51%//009112 NT2NE20002590//OOCYTE ZINC FINGER PROTEIN XLCOF6.1 (FRAGMENT).//6.30E-30//77aa//53%//P18750 NT2NE20002990//69 KD ISLET CELL AUTOANTIGEN (ICA69) (ISLET CELL AUTOANTIGEN 1).//3.30E-113//335aa//57%//005084

NT2NE20003270//GLUCOAMYLASE S1/S2 PRECURSOR (EC 3.2.1.3) (GLUCAN 1,4-ALPHA-GLUCOSIDASE) (1.4-ALPHA-D-GLUCAN GLUCOHYDROLASE).//7.00E-21//739aa//22%//P08640

NT2NE20003690//PROPIONYL-COA CARBOXYLASE ALPHA CHAIN PRECURSOR (EC 6.4.1.3) (PCCASE) (PRO-PANOYL-COA:CARBON DIOXIDE LIGASE).//1.80E-26//68aa//86%//P05165

NT2NE20003840//MICRONUCLEAR LINKER HISTONE POLYPROTEIN (MIC LH) [CONTAINS: LINKER HISTONE PROTEINS ALPHA, BETA, DELTA AND GAMMA].//7.80E-10//366aa//22%//P40631

25 NT2NE20003920

NT2NE20004550//sdk (sidekick) protein//4.90E-11//177aa//31%//T13924

NT2NE20004700

NT2NE20005170//Homo sapiens ciliary dynein heavy chain 9 (DNAH9) mRNA, complete cds.//1.20E-103//226aa// 90%//AF257737

NT2NE20005360//40S RIBOSOMAL PROTEIN SA (P40) (34/67 KD LAMININ RECEPTOR)
(COLON CARCINOMA LAMININ-BINDING PROTEIN) (NEM/1CHD4).//1.50E-47//91aa//98%//P08865

NT2NE20005860//Rattus norvegicus endo-alpha-D-mannosidase (Enman) mRNA, complete cds.//1.70E-85//207aa//69%//AF023657

35 NT2NE20006360

NT2NE20006580//Homo sapiens mRNA for RET finger protein-like 2//1.10E-152//288aa//98%//AJ010231

NT2NE20007060

NT2NE20007630

NT2NE20007870

40 NT2NE20008020

NT2NE20008090//ZINC FINGER PROTEIN 85 (ZINC FINGER PROTEIN HPF4) (HTF1).//1.90E-207//511aa//71%//Q03923

NT2NE20009800

NT2NE20011560

45 NT2NE20012470

NT2NE20013240

NT2NE20013370//Homo sapiens estrogen-responsive B box protein (EBBP) mRNA, complete cds.//4.30E-208// 394aa//97%//AF096870

NT2NE20013640

50 NT2NE20013720//Homo sapiens mRNA for putative ribulose-5-phosphate-epimerase, partial cds.//7.90E-58//116aa//98%//AJ224326

NT2NE20014030

NT2NE20014280

NT2NE20014350

NT2NE20015300

NT2NE20016230

NT2NE20016260//Homo sapiens G-protein coupled receptor RE2 mRNA, complete cds.//2.00E-148//270aa//100%// AF091890

NT2NE20016340//NADH-UBIQUINONE OXIDOREDUCTASE 9 KD SUBUNIT PRECURSOR (EC 1.6.5.3) (EC 1.6.99.3) (COMPLEX I-9KD) (CI-9KD).//5.50E-26//86aa//68%//P56181

NT2NE20016480

NT2NE20016660//PUTATIVE ATP-DEPENDENT RNA HELICASE YDL031W.//3.90E-15//176aa//30%//Q12389

5 NT2NE20016970//MSF1 PROTEIN.//3.00E-23//169aa//34%//P35200

NT2NE20034080//Rattus norvegicus neurestin alpha mRNA, complete cds.//3.70E-258//449aa//99%//AF086607 NT2NE20035690//Homo sapiens phosphoinositol 3-phosphate-binding protein-2 (PEPP2) mRNA, complete cds.// 1.60E-180//227aa//98%//AF302150

NT2NE20044900

10 NT2NE20047160//Homo sapiens AD-017 protein mRNA, complete cds.//2.70E-91//357aa//47%//AF157318 NT2NE20053710

NT2NE20054410//SPLICEOSOME ASSOCIATED PROTEIN 49 (SAP 49) (SF3B53).//4.50E-06//121aa//33%//Q15427 NT2NE20055170//Homo sapiens torsinA (DYT1) mRNA, complete cds.//9.50E-159//232aa//89%//AF007871 NT2NE20057200//Mus musculus Ubc6p homolog mRNA, complete cds.//3.80E-108//222aa//91%//U93242

15 NT2RI10000160

NT2RI10000270

NT2RI10000480//Homo sapiens MKP-1 like protein tyrosine phosphatase mRNA, complete cds.//8.30E-49//179aa//50%//AF038844

NT2RI10001640

20 NT2RI20000640

NT2RI20002700

NT2RI20002820//NUCLEOLAR AUTOANTIGEN N055.//5.00E-243//437aa//100%//Q92791

NT2RI20002940

NT2RI20003410//ZINC FINGER PROTEIN 43 (ZINC PROTEIN HTF6).//9.30E-226//578aa//70%//P28160

25 NT2RI20004120//CREB-BINDING PROTEIN.//4.40E-05//170aa//30%//Q92793

NT2RI20004210//ZINC FINGER PROTEIN 75.//1.10E-96//225aa//76%//P51815

NT2RI20005970

NT2RI20006690//TRICHOHYALIN.//7.10E-17//222aa//32%//P37709

NT2RI20006710

30 NT2RI20006850//HISTONE H1.2 (H1 VAR. 1) (H1C).//3.30E-05//154aa//25%//P15864

NT2RI20007380

NT2RI20008650

NT2RI20009740

NT2RI20010100//FATTY ACYL-COA HYDROLASE PRECURSOR, MEDIUM CHAIN (EC 3.1.2.14) (THIOESTERASE

35 B).//1.10E-114//425aa//46%//Q04791

NT2RI20010830//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//2.30E-174//554aa//51%//P51523 NT2RI20010910//SPLICING FACTOR, ARGININE/SERINE-RICH 4 (PRE-MRNA SPLICING FACTOR SRP75).// 3.40E-22//195aa//36%//Q08170

NT2RI20012350

40 NT2RI20012440

NT2RI20013420//Mus musculus cyclin ania-6b mRNA, partial cds.//2.70E-73//163aa//91%//AF211859 NT2RI20013850//Homo sapiens P38IP (P38IP) mRNA, complete cds.//7.70E-101//213aa//95%//AF093250 NT2RI20014090//DYSTROPHIN.//3.60E-15//546aa//20%//P11531

NT2RI20014100

NT2RI20014490//Mus musculus retinoic acid-responsive protein (Stra6) mRNA,

complete cds.//1.30E-263//672aa//73%//AF062476

NT2RI20014500//TRICHOHYALIN.//4.80E-19//610aa//23%//Q07283

NT2RI20015190//Homo sapiens misato mRNA, partial cds.//7.60E-149//271aa//100%//AF272833

NT2RI20015400//Alcohol dehydrogenase/ribitol dehydrogenase//4.30E-107//469aa//44%//AAB93456

50 NT2RI20015950//Zea mays clone AGPZm1 arabinogalactan protein (agp) mRNA, partial cds.//5.60E-05//180aa//32%// AF134579

NT2RI20016210//Probable transposase - human transposon MER37//3.50E-19//156aa//35%//S72481 NT2RI20016570

NT2RI20017260

55 NT2RI20018460//basic domain/leucine zipper transcription factor//3.00E-52//203aa//59%//AAA65688 NT2RI20018660//Mus musculus erythroid membrane-associated protein ERMAP (Ermap) mRNA, complete cds.//

9.20E-187//385aa//72%//AF153906 NT2RI20020220//VARIANT-SURFACE-GLYCOPROTEIN PHOSPHOLIPASE C (EC 3.1.4.47) (VSG LIPASE) (GLYC-

OSYLPHOSPHATIDYLINOSITOL-SPECIFIC PHOSPHOLIPASE C) (GPI-PLC).//5.60E-21//271aa//27%//015886 NT2RI20020410//SALIVARY PROLINE-RICH PROTEIN PO (ALLELE K) [CONTAINS: PEPTIDE P-D] (FRAGMENT).// 1.20E-05//127aa//32%//P10162

NT2RI20021520

5 NT2RI20022430

NT2RI20022520

NT2RI20022700//X123 protein//7.20E-80//165aa//97%//168673

NT2RI20025170//Homo sapiens PAR3 (PAR3) mRNA, complete cds.//1.30E-113//373aa//45%//AF252293

NT2R120025300//GLUCOAMYLASE S1/S2 PRECURSOR (EC 3.2.1.3) (GLUCAN 1,4-ALPHA-GLUCOSIDASE)

10 (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE).//1.40E-14//628aa//21%//P08640

NT2R120025410//ZINC FINGER PROTEIN 135.//3.90E-72//301aa//42%//P52742

NT2R120025540//NUCLEAR AUTOANTIGENIC SPERM PROTEIN (NASP).//1.1E-312//604aa//98%//P49321

NT2R120025850//PUTATIVE 90.2 KD ZINC FINGER PROTEIN IN CCA1-ADK2 INTERGENIC REGION.//1.40E-73// 246aa//42%//P39956

15 NT2RI20026540

NT2RI20028020

NT2RI20028520

NT2RI20029260//ARP2/3 COMPLEX 16 KDA SUBUNIT (P16-ARC).//1.00E-52//154aa//68%//015511

NT2RI20029580//Homo sapiens mRNA for copine VI protein.//1.00E-207//425aa//73%//AJ133798

20 NT2RI20029700

NT2RI20030110//Mus musculus clone:2-65 mRNA, complete cds.//2.30E-28//124aa//50%//AB030198

NT2RI20030190

NT2RI20030510

NT2RI20030670

25 NT2RI20031540//DXS6673E PROTEIN.//2.80E-05//240aa//22%//Q14202 NT2RI20032050//Homo sapiens transportin2 mRNA, complete cds.//0//663aa//98%//AF019039

NT2RI20032220//INTRACELLULAR PROTEIN TRANSPORT PROTEIN US01.//4.90E-16//582aa//23%//P25386 NT2RI20033010//Homo sapiens UDP-GIcNAc:a-3-D-mannoside b1,2-N-acetylglucosaminyltransferase I.2 (MGAT1.2) mRNA, partial cds.//1.40E-293//579aa//93%//AF250859

30 NT2RI20033040

NT2RI20033380

NT2RI20033440//PRESYNAPTIC PROTEIN SAP97 (SYNAPSE-ASSOCIATED PROTEIN 97) (DISCS, LARGE HO-MOLOG 1).//2.20E-08//128aa//36%//Q12959

NT2R120033830//Homo sapiens SGC32445 protein (SGC32445) mRNA, complete cds.//1.80E-67//134aa//100%//

35 AF251041

NT2RI20035560

NT2RI20036780//SERINE PROTEASE PC6 PRECURSOR (EC 3. 4. 21. -) (SUBTILISIN/KEXIN-LIKE PROTEASE PC5) (CONVERTASE PC5).//0//633aa//97%//P41413

NT2RI20036950//TRICHOHYALIN.//1.70E-13//313aa//25%//P37709

40 NT2RI20037510//FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE (EC 3.2.2.23) (FAPY-DNA GLYCOSYLASE).// 1.20E-05//238aa//28%//P74290

NT2RI20040590

NT2RI20041900//REGULATOR OF MITOTIC SPINDLE ASSEMBLY 1 (RMSA-1).//3.20E-13//108aa//44%//P49646 NT2RI20042840

45 NT2RI20043040//Homo sapiens NY-REN-2 antigen mRNA, complete cds.//2.80E-188//539aa//65%//AF155095

NT2RI20043980

NT2RI20044420

NT2RI20046060

NT2RI20047830

50 NT2RI20048400

NT2RI20049160

NT2RI20049840

NT2RI20049850

NT2RI20050610

55 NT2RI20050870//Homo sapiens putative anion transporter 1 mRNA, complete cds.//8.10E-262//533aa//96%//

NT2RI20051500//Mus musculus ST6GalNAc V mRNA for GD1 alpha synthase, complete cds.//2.40E-168//336aa//90%//AB030836

NT2RI20053350//DNA REPAIR/TRANSCRIPTION PROTEIN MET18/MMS19.1/2.00E-23//234aa//32%//P40469 NT2RI20053680//Homo sapiens NY-REN-36 antigen mRNA, partial cds.//5.80E-62//124aa//100%//AF155106 NT2RI20055640//Mus musculus mRNA for ganglioside-induced differentiation associated protein 1.//2.50E-100//319aa//58%//Y17850

5 NT2RI20056280

NT2RI20056470//KERATIN, TYPE II CYTOSKELETAL 4 (CYTOKERATIN 4) (K4) (CK4).//2.40E-278//534aa//99%// P19013

NT2RI20057230//SPLICING FACTOR, ARGININE/SERINE-RICH 4 (PRE-MRNA SPLICING FACTOR SRP75).// 3.00E-28//241aa//36%//Q08170

10 NT2RI20058110//CELL DIVISION CONTROL PROTEIN 25.//3.30E-18//419aa//25%//P04821

NT2RI20058510//PLECTIN.//3.50E-07//551aa//21%//P30427

NT2RI20060710//ZINC FINGER PROTEIN ZIC4 (ZINC FINGER PROTEIN OF THE CEREBELLUM 4).//2.10E-153//312aa//86%//Q61467

NT2RI20060720//HYPOTHETICAL PROTEIN KIAA0179.//0//692aa//99%//Q14684

15 NT2RI20061270

NT2RI20061830//Proline-rich protein M14 precursor//1.50E-17//170aa//37%//A28996

NT2RI20062100//Mus musculus shd mRNA, complete cds.//1.00E-137//337aa//77%//AB018423

NT2RI20063450

NT2RI20064120//Rattus norvegicus mRNA for CDCrel-1A, complete cds.//6.70E-148//280aa//98%//AB027143

20 NT2RI20064870

NT2RI20065060//Drosophila melanogaster rudimentary gene, intron 3; anon-15AB gene, complete cds.//1.40E-07// 212aa//23%//AF172941

NT2RI20065530

NT2RI20066670

25 NT2RI20066790

NT2RI20066820//Human WW domain binding protein-1 mRNA, complete cds.//5.70E-46//181aa//46%//U79457 NT2RI20067030//Homo sapiens nolp mRNA, complete cds.//1.80E-85//406aa//51%//AB017800 NT2RI20067350//Neofelis nebulosa strain nnex zinc finger protein Zfx (Zfx) gene, partial cds.//2.10E-23//245aa//27%// AF252979

30 NT2RI20067880

NT2RI20068250

NT2RI20068550//Homo sapiens RNA helicase (RIG-I) mRNA, complete cds.//1.20E-52//340aa//34%//AF038963 NT2RI20070480//Mus musculus DXImx48e protein (DXImx48e) mRNA, complete cds.//3.40E-169//467aa//72%// AF229644

35 NT2RI20070840

NT2RI20070960//PROTO-ONCOGENE DBL PRECURSOR [CONTAINS: MCF2].//4. 10E-30//431aa//27%//P10911 NT2RI20071160

NT2RI20071330//ZINC FINGER PROTEIN 91 (ZINC FINGER PROTEIN HTF10) (HPF7).//2.80E-240//647aa//64%//Q05481

40 NT2RI20071480

NT2RI20072140

NT2RI20072540//Arabidopsis thaliana ZCF61 mRNA, complete cds.//2.20E-12//113aa//35%//AB028228 NT2RI20073030

NT2RI20073840//Homo sapiens mixed lineage kinase mRNA, complete cds.//2.30E-179//362aa//93%//AF238255

45 NT2RI20073860

NT2RI20074390//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//2.30E-97//489aa//41%//P51523 NT2RI20074690//Homo sapiens NY-REN-58 antigen mRNA, complete cds.//4.00E-221//438aa//99%//AF155115 NT2RI20074980//Homo sapiens carboxypeptidase Z precursor, mRNA, complete cds.//3.10E-189//357aa//96%// U83411

50 NT2RI20075070

NT2RI20075720

NT2RI20075890

NT2RI20077230//Homo sapiens BRI3 mRNA, complete cds.//1.80E-114//182aa//99%//AF272043 NT2RI20077290

55 NT2RI20077510

NT2RI20077540//INTESTINAL MEMBRANE A4 PROTEIN (DIFFERENTIATION-DEPENDENT PROTEIN A4) (PROTEOLIPID PROTEIN 2).//2.30E-12//111aa//33%//Q04941 NT2RI20078270

NT2RI20078790//HOMEOBOX PROTEIN HOX-A4 (CHOX-1.4).//7.80E-08//83aa//43%//P17277

NT2RI20078840//ARS BINDING PROTEIN 1.//1.50E-17//313aa//27%//P49777

NT2RI20078910//DMR-N9 PROTEIN.//1.40E-122//398aa//59%//Q08274

NT2RI20080500//BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE

5 PROTEIN PRECURSOR (HSPG) (PERLECAN) (PLC).//5.90E-43//528aa//28%//P98160

NT2RI20081880//Mus musculus Mporc-b mRNA for porcupine-B, complete cds.//4.40E-64//125aa//97%//AB036746 NT2RI20082210//CORNIFIN B (SMALL PROLINE-RICH PROTEIN 1B) (SPR1B) (SPR1 B).//4.70E-12//110aa//37%//Q62267

NT2RI20083360

10 NT2RI20083960//Homo sapiens mRNA for SH3 binding protein, complete cds.//3.60E-31//159aa//44%//AB005047 NT2RI20084810//1-ACYL-SN-GLYCEROL-3-PHOSPHATE ACYLTRANSFERASE ALPHA (EC 2.3.1.51) (1- AGP ACYLTRANSFERASE) (1-AGPAT) (LYSOPHOSPHATIDIC ACID

ACYLTRANSFERASE- ALPHA) (LPAAT-ALPHA).//4.70E-60//114aa//99%//Q99943

NT2RI20085260

15 NT2RI20085980//MILK FAT GLOBULE-EGF FACTOR 8 PRECURSOR (MFG-E8) (MGP57/53)

(PAS- 6/PAS-7 GLYCOPROTEIN) (MFGM) (SPERM SURFACE PROTEIN SP47) (BP47) (COMPONENTS 15/16).// 5.40E-31//174aa//41%//Q95114

NT2RI20086560

NT2RI20087140//Homo sapiens PR-domain zinc finger protein 5 (PRDM5) mRNA, complete cds.//6.10E-51//101aa//

99%//AF272897

NT2RI20087490//SPLICEOSOME ASSOCIATED PROTEIN 49 (SAP 49) (SF3B53).//2.00E-08//156aa//37%//Q15427 NT2RI20087910//PROBABLE URACIL PHOSPHORIBOSYLTRANSFERASE (EC 2.4.2.9) (UMP PYROPHOSPHORYLASE) (UPRTASE).//1.80E-42//159aa//54%//013867 NT2RI20088010

25 NT2RI20088120//AXONEME-ASSOCIATED PROTEIN MST101(2).//4.00E-05//185aa//24%//Q08696

NT2RI20089420//NEURAL CELL ADHESION MOLECULE L1 PRECURSOR (N-CAM L1).//3.00E-07//104aa//31%// 005695

NT2RI20090650//ZINC FINGER PROTEIN 26 (ZFP-26) (MKR3 PROTEIN) (FRAGMENT).//2.10E-30//194aa//37%//P10076

30 NT2RI20090660//PLEGTIN.//7.20E-14//450aa//24%//P30427

NT2RI20090830

NT2RI20091440

NT2RI20092150//ZING FINGER PROTEIN 165.//3.10E-46//179aa//56%//P49910

NT2RI20092890//CARBOXYPEPTIDASE N 83 KD CHAIN (CARBOXYPEPTIDASE N REGULATORY SUBUNIT)

35 (FRAGMENT).//3.70E-29//293aa//31%//P22792

NT2RI20094060//Homo sapiens rec mRNA, complete cds.//1.40E-112//293aa//62%//AB023584

NT2RP60000080//Homo sapiens Pig11 (PIG11) mRNA, complete cds.//6.60E-38//117aa//71%//AF010315

NT2RP60000170

NT2RP60000320

40 NT2RP60000350//Homo sapiens mRNA for SH3 binding protein, complete cds.//1.30E-54//253aa//45%//AB005047 NT2RP60000390

NT2RP60000590

NT2RP60000720//Pinus taeda clone PtaAGP6 putative arabinogalactan protein mRNA, complete cds.//1.50E-05// 165aa//29%//AF101785

45 NT2RP60000860//Homo sapiens mRNA for NICE-5 protein.//6.30E-192//883bp//99%//AJ243666

NT2RP60001000//ZINC FINGER PROTEIN 41 (FRAGMENT).//7.10E-128//366aa//59%//P51814

NT2RP60001090//RING CANAL PROTEIN (KELCH PROTEIN).//6.40E-79//553aa//33%//Q04652

NT2RP60001230//KINESIN LIGHT CHAIN (KLC).//1.10E-206//566aa//69%//Q07866

NT2RP60001270//ZINC FINGER PROTEIN ZIC4 (ZINC FINGER PROTEIN OF THE CEREBELLUM 4).//3.70E-131//

50 264aa//67%//Q61467

NT2RP70000410

NT2RP70000690//MUCIN 1 PRECURSOR (POLYMORPHIC EPITHELIAL MUCIN) (PEM) (PEMT) (EPISIALIN) (TU-MOR-ASSOCIATED MUCIN) (CARCINOMA-ASSOCIATED MUCIN) (TUMOR-ASSOCIATED EPITHELIAL MEMBRANE ANTIGEN) (EMA) (H23AG) (PEANUT- REACTIVE

URINARY MUCIN) (PUM) (BREAST CARCINOMA-ASSOCIATED ANTIGEN DF3).//2.00E-26//911aa//25%//P15941 NT2RP70000760//TRANSLATION INITIATION FACTOR EIF-2B EPSILON SUBUNIT (EIF-2B GDP-GTP EXCHANGE FACTOR).//1.70E-23//66aa//81%//P47823

NT2RP70002380//Adiantum capillus-veneris AcExt1 mRNA for Extensin, complete cds.//2.00E-05//93aa//37%//

AB008227

NT2RP70002590//HYPOTHETICAL 32.0 KDA PROTEIN IN NNF1-STE24 INTERGENIC REGION.//2.20E-12//251aa// 28%//P47153

NT2RP70002710//Mus musculus zinc finger protein 276 C2H2 type (Zfp276) mRNA, complete cds.//1.80E-101// 253aa//77%//AF178935

NT2RP70003640

NT2RP70003910

NT2RP70004250//MYOSIN HEAVY CHAIN, NONMUSCLE TYPE B (CELLULAR MYOSIN HEAVY CHAIN, TYPE B) (NMMHC-B).//4.30E-08//244aa//24%//P35580

10 NT2RP70004770//UDP-N-ACETYLGLUCOSAMINE-PEPTIDE N-AGETYLGLUCOSAMINYLTRANSFERASE 110 KDA SUBUNIT (EC 2.4.1.-) (O-GLCNAC TRANSFERASE P110 SUBUNIT).//1.00E-22//213aa//32%//P56558 NT2RP70005790

NT2RP70006240//Phosphatidylinositol-4-phosphate 5-kinase homolog T3K9.2//1.90E-16//204aa//30%//T02098 NT2RP70008120//HOMEOBOX PROTEIN HOX-B9 (HOX-2.5).//2.40E-53//117aa//87%//P20615

NT2RP70009060//Medicago truncatula mRNA for 85p protein (85p gene).//5.10E-07//229aa//23%//AJ249679 NT2RP70010800//Mus musculus mRNA for MILI (Miwi like), complete cds.//2.40E-280//614aa//83%//AB032605 NT2RP70011660//P CATION-TRANSPORTING ATPASE C10C6.6 IN CHROMOSOME IV (EC 3.6.1.-). //0//1165aa//53%//P90747

NT2RP70012310

NT2RP70013060//U1 SMALL NUCLEAR RIBONUCLEOPROTEIN 70 KDA (U1 SNRNP 70

KDA).//1.50E-30//241aa//32%//P09406

NT2RP70013350

NT2RP70015910//bK57G9.1 (novel Kringle and CUB domain protein) [Homo sapiens].//1.00E-140//247aa//95%// CAB62952

25 NT2RP70018560//Mus musculus polyhomeotic (mPh2) mRNA, complete cds.//5.00E-232//465aa//91%//U81491 NT2RP70021510

NT2RP70022430//Tax1-binding protein TRX - human.//6.00E-71//180aa//93%//S68091

NT2RP70023760//M PROTEIN, SEROTYPE 2.1 PRECURSOR.//2.20E-13//331aa//25%//P50468

NT2RP70023790//110 KDA ANTIGEN (PK110) (FRAGMENT).//7.00E-07//162aa//23%//P13813

30 NT2RP70024490

NT2RP70024500//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//4.80E-66//312aa//38%//P51523 NT2RP70025540

NT2RP70026190//Mus musculus ubiquitin-protein ligase E3-alpha (Ubr1) mRNA, complete cds.//6.20E-305//597aa// 93%//AF061555

35 NT2RP70028290//Scm-related gene containing four mbt domains [Mus musculus].//6.00E-59//500aa//31%// NP\_062333

NT2RP70028410

NT2RP70028750//RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170)

(REED- STERNBERG INTERMEDIATE FILAMENT ASSOCIATED PROTEIN).//2.60E-11//87aa//44%//P30622

40 NT2RP70029060//HEAT SHOCK PROTEIN HSP 90-ALPHA (HSP

86).//0//731aa//99%//P07900

NT2RP70029820//Homo sapiens GROS1-L protein mRNA, complete cds.//2.40E-177//680aa//51%//AF097432 NT2RP70030500

NT2RP70030550

45 NT2RP70030910

NT2RP70032030//ZING FINGER PROTEIN 184 (FRAGMENT).//3.50E-139//366aa//55%//Q99676

NT2RP70033040//YceA protein homolog ybfQ - Bacillus subtilis.//1.00E-35//300aa//33%//C69750

NT2RP70036290//MHG CLASS II TRANSACTIVATOR CIITA.//4.80E-09//116aa//31%//P33076

NT2RP70036320//Microfilarial sheath protein//5.00E-06//92aa//35%//S46966

50 NT2RP70036470

NT2RP70036800//RING CANAL PROTEIN (KELCH PROTEIN).//4.50E-107//652aa//38%//Q04652 NT2RP70039600

NT2RP70040800//CELL SURFACE GLYCOPROTEIN 1 PRECURSOR (OUTER LAYER PROTEIN B) (S-LAYER PROTEIN 1).//5.60E-20//307aa//28%//Q06852

NT2RP70042040//ZINC FINGER PROTEIN MLZ-4 (ZINC FINGER PROTEIN 46).//9.20E-61//254aa//46%//Q03309 NT2RP70042330//HYPOTHETICAL PROTEIN MJ0941.//8.80E-06//133aa//24%//Q57711 NT2RP70042600//MYOSIN HEAVY CHAIN, NONMUSCLE TYPE B (CELLULAR MYOSIN HEAVY CHAIN, TYPE B) (NMMHC-B).//4.50E-21//715aa//21%//P35580

NT2RP70043730

NT2RP70043960//Mus musculus mRNA for Fish protein.//0//866aa//88%//AJ007012

NT2RP70045410//Mus musculus MGA protein mRNA, complete cds.//2.70E-265//1040aa//57%//AF205935

NT2RP70046560//PEREGRIN (BR140 PROTEIN).//1.30E-48//304aa//36%//P55201

5 NT2RP70046870//VEGETATIBLE INCOMPATIBILITY PROTEIN HET-E-1.//9.70E-07//395aa//24%//Q00808

NT2RP70047510

NT2RP70047660

NT2RP70047900

10 AB030505

NT2RP70049250//VASODILATOR-STIMULATED PHOSPHOPROTEIN (VASP).//1.90E-08//118aa//33%//P50552

NT2RP70049750

NT2RP70052050//Human transformation-related protein mRNA, 3' end.//2.20E-12//74aa//52%//L24521

NT2RP70052190

15 NT2RP70054680

NT2RP70054930

NT2RP70055020//Homo sapiens mRNA for paraplegin-like protein.//3.00E-29//68aa//94%//Y18314

NT2RP70055130//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//7.00E-130//461aa//46%//P51523

NT2RP70055200//INTEGUMENTARY MUCIN A.1 PRECURSOR (FIM-A.1) (PREPROSPASMOLYSIN).//2.40E-07//

20 120aa//27%//P10667

NT2RP70061620//ZINC FINGER PROTEIN MFG-3,//3.60E-16//266aa//27%//P16374

NT2RP70061880//GTPASE-ACTIVATING PROTEIN.//1.70E-08//265aa//21%//P33277

NT2RP70062960//EXCISION REPAIR PROTEIN ERCC-6 (COCKAYNE SYNDROME PROTEIN CSB).//5.80E-67// 185aa//46%//Q03468

NT2RP70063040//Homo sapiens MLL septin-like fusion protein (MSF) mRNA, complete cds.//1.00E-187//348aa// 99%//AF123052

NT2RP70063740

NT2RP70064080//Drosophila melanogaster F protein (olf186) mRNA, complete cds.//2.50E-54//203aa//56%// AF188634

30 NT2RP70064900//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//1.20E-149//580aa//40%//P51523 NT2RP70065270//LIM-ONLY PROTEIN 6 (TRIPLE LIM DOMAIN PROTEIN 6).//2.40E-136//341aa//61%//043900 NT2RP70066210

NT2RP70067010

NT2RP70069800

35 NT2RP70069860//ZINC FINGER PROTEIN 184 (FRAGMENT).//4.40E-141//566aa//46%//Q99676

NT2RP70071140

NT2RP70071540

NT2RP70071770//Homo sapiens multiple membrane spanning receptor TRC8 (TRC8) mRNA, complete cds.//8.50E-61//599aa//29%//AF064801

40 NT2RP70072210//Rattus norvegicus schlafen-4 (SLFN-4) mRNA, complete cds.//1. 10E-19//244aa//32%//AF168795 NT2RP70072520//Human serine/threonine kinase mRNA, partial cds.//1.20E-79//154aa//100%//U79240 NT2RP70073590

NT2RP70073810//Sulfonylurea receptor 2A//4.50E-70//135aa//100%//NP\_064694

NT2RP70074060

45 NT2RP70074220//SYNAPSIN I (BRAIN PROTEIN 4.1).//2.20E-05//116aa//34%//P17600

NT2RP70075040

NT2RP70075370//52 KDA RO PROTEIN (SJOGREN SYNDROME TYPE A ANTIGEN (SS-A)) (RO (SS-A)).//1.20E-97//482aa//42%//P19474

NT2RP70076100//Homo sapiens mRNA for putative phospholipase, complete cds.//7.10E-189//424aa//53%//

60 AB019435 NT2RP70076170

NT2RP70076430//PUTATIVE IMPORTIN BETA-4 SUBUNIT (KARYOPHERIN BETA-4

SUBUNIT).//1.70E-42//692aa//26%//060100

NT2RP70079250//Homo sapiens contactin associated protein (Caspr) mRNA, complete cds.//2.30E-218//963aa//

55 42%//U87223

NT2RP70079300

NT2RP70079750//Homo sapiens BAC526N18 neurexin III gene, partial cds.//5.00E-177//334aa//100%//AF123462 NT2RP70081330

NT2RP70081370//ATP-BINDING CASSETTE, SUB-FAMILY A, MEMBER 1 (ATP-BINDING CASSETTE TRANSPORTER 1) (ATP-BINDING CASSETTE 1).//1.10E-56//364aa//36%//P41233 NT2RP70081420

NT2RP70081440//DUAL SPECIFICITY MITOGEN-ACTIVATED PROTEIN KINASE 4 (EC 2.7.1.-) (MAP KI-

NASE KINASE 4) (JNK ACTIVATING KINASE 1) (C-JUN N- TERMINAL

TEIN GP220].//3.60E-09//431aa//23%//P03200

KINASE KINASE 1) (JNKK) (SAPK/ERK KINASE 1) (SEK1).//7.20E-77//162aa//91%//P45985 NT2RP70081670//85.1 KDA PROTEIN IN GREB-FEOA INTERGENIC REGION.//3.10E-108//568aa//38%//P46837 NT2RP70083150//ENVELOPE GLYCOPROTEIN GP340 (MEMBRANE ANTIGEN) (MA) [CONTAINS: GLYCOPRO-

NT2RP70084060//Probable hexosyltransferase (EC 2.4.1.-) SC2G5.06//4.90E-07//127aa//32%//T34839 NT2RP70084410//Polybromo 1 protein - chicken //0//985aa//88%//S60678 NT2RP70084870//TRICHOHYALIN.//9.20E-16//452aa//21%//P37709 NT2RP70085500//Mus musculus rig-1 protein

mRNA, complete cds.//0//976aa//86%//AF060570

NT2RP70085570//DNA BINDING PROTEIN URE-B1 (EC 6.3.2.-).//3.40E-23//282aa//27%//P51593

15 NT2RP70086230

NT2RP70087200//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//1.20E-164//689aa//42%//P51523 NT2RP70088550//Rattus norvegicus membrane-associated guanylate kinase-interacting protein 2 Maguin-2 mRNA, complete cds.//7.90E-267//434aa//98%//AF102854

NT2RP70090120//CHLORIDE CHANNEL PROTEIN 7 (CLC-7) (FRAGMENT).//0//734aa//99%//P51798

NT2RP70090190//ZINC FINGER PROTEIN 83 (ZINC FINGER PROTEIN HPF1).//3.60E-146//395aa//61%//P51522 NT2RP70091490//GLUCOSE TRANSPORTER TYPE 2, LIVER.//3.30E-17//109aa//37%//P14246 NT2RP70091680

NT2RP70092150

NT2RP70092360//BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE

PROTEIN PRECURSOR (HSPG) (PERLECAN) (PLC).//4.50E-91//1310aa//26%//Q05793 NT2RP70092590

NT2RP70093220//CHLORIDE CHANNEL PROTEIN 5 (CLC-5).//0//746aa//99%//P51795 NT2RP70093630 NT2RP70093700//PUTATIVE SERINE/THREONINE-PROTEIN KINASE PKWA (EC 2.7.1.).//9.90E-11//241aa//21%// P49695

30 NT2RP70093730

NT2RP70093940//Exocyst complex protein sec5//0//924aa//93%//T09220

NT2RP70093970

NT2RP70094290

NT2RP70094660

35 NT2RP70094810//Drosophila melanogaster Dispatched (dispatched) mRNA, complete cds.//1.00E-105//579aa//38%// AF200691

NT2RP70094980//FIBULIN-1, ISOFORM A PRECURSOR.//6.50E-30//211aa//38%//P23142

NT2RP70095020

NT2RP70095070

40 NTONG10000330

NTONG10000520//Rattus norvegicus mRNA for Kelch related protein 1 (krp1 gene).//2.00E-118//439aa//49%// AJ293948

NTONG10000980

NTONG10001230//Mus msuculus mRNA, partial cds, clone CLFEST42.//6.10E-07//217aa//25%//D82816

45 NTONG10001300//Gallus gallus kinectin mRNA, complete cds.//1.30E-15//534aa//22%//U15617

NTONG10001820//Mus musculus mammalian inositol hexakisphosphate kinase 1 (lp6k1) mRNA, complete cds.// 5.20E-77//294aa//53%//AF177144

NTONG10002140//SARCALUMENIN PRECURSOR.//3.50E-204//376aa//97%//P13666

NTONG10002460//CYCLIN-DEPENDENT KINASE INHIBITOR 1C (CYCLIN-DEPENDENT KINASE INHIBITOR P57)

50 (P57KIP2).//1.10E-16//156aa//40%//P49918

NTONG10002570

NTONG10002640//HYPOTHETIGAL 71.1 KD PROTEIN IN DSK2-CAT8 INTERGENIC REGION.//6.90E-98//603aa// 39%//Q03262

NTONG20002650//Probable transmembrane protein of fission yeast//8.50E-63//539aa//28%//T39483

NTONG20003340//ZINC FINGER PROTEIN 90 (ZFP-90) (ZINC FINGER PROTEIN

NK10).//3.10E-108//225aa//83%//061967

NTONG20003630//CREB-BINDING PROTEIN.//3.00E-05//160aa//31%//Q92793

NTONG20004920

NTONG20005830

NTONG20008000

NTONG20008780//MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B).//1.40E-42//330aa//31%//P27790

5 NTONG20009660//Mus musculus N-RAP mRNA, complete cds.//2.50E-56//393aa//38%//U76618

NTONG20009850

NTONG20011370

NTONG20012220

NTONG20014280

10 NTONG20015500//ZINC FINGER PROTEIN 135.//1.40E-128//340aa//64%//P52742 NTONG20016120//Oxystyrol-binding protein homologue 1 [Mus musculus domesticus].//3.00E-43//342aa//37%//AJ278263

OCBBF10000420

OCBBF10000670

OCBBF10000860

15 OCBBF10000910//SORBIN.//1.30E-71//145aa//91%//P28220

OCBBF10001040

OCBBF10001180//TUMOR NECROSIS FACTOR, ALPHA-INDUCED PROTEIN 1, ENDOTHELIAL (B12 PROTEIN).// 1.00E-12//124aa//37%//Q13829

OCBBF10001190

OCBBF10001220//RING CANAL PROTEIN (KELCH PROTEIN).//8.50E-32//274aa//31%//Q04652

OCBBF20000130

OCBBF20001260

OCBBF20002310//PHOSPHOLIPASE A2 INHIBITOR SUBUNIT B PRECURSOR (PLI-B).//3.50E-27//307aa//29%// 093233

25 OCBBF20002770//EARLY EMBRYOGENESIS ZYG-11 PROTEIN.//1.40E-46//348aa//34%//P21541 OGBBF20002870

OCBBF20007190//Putative cleavage and polyadenylation specifity factor [Arabidopsis thaliana].//1.00E-142//450aa//53%//AAD12712

OCBBF20008240//THREONYL-TRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE-TRNA LIGASE)

30 (THRRS).//1.10E-244//484aa//77%//P26639

OCBBF20009040

OCBBF20009980

OCBBF20010750

OCBBF20011010//ZINC FINGER PROTEIN 91 (ZINC FINGER PROTEIN HTF10) (HPF7).//1.10E-133//405aa//55%// Q05481

OCBBF20011240//TESTIS SPECIFIC PROTEIN A (ZINC FINGER PROTEIN TSGA).//1.60E-81//391aa//42%// O63679

OCBBF20011400//VACUOLAR PROTEIN SORTING-ASSOCIATED PROTEIN VPS8.//3.30E-17//199aa//23%//P39702

40 OCBBF20011760//Mus musculus actin-binding protein (ENC-1) mRNA, complete cds.//2.30E-236//527aa//75%// U65079

OCBBF20012100//Cavia porcellus phosphatidic acid phosphatase 2a (PAP2a) mRNA, complete cds.//6.30E-29// 285aa//29%//AF088283

OCBBF20013070

45 OGBBF20014020//Mus musculus NSD1 protein mRNA, complete cds.//0//886aa//73%//AF064553

OCBBF20014080//H.sapiens mRNA for thioesterase 11.//3.00E-67//163aa//83%//X86032

OCBBF20014940//ubiquitin-protein ligase 1 [Arabidopsis thaliana]//2.00E-15//200aa//30%//AAF36454 OCBBF20015270

OCBBF20015280//MYOSIN HEAVY CHAIN, SMOOTH MUSCLE ISOFORM (SMMHC).//4.90E-23//415aa//22%// P35748

OCBBF20015860//TRANSCRIPTION ELONGATION FACTOR S-II (TFIIS).//7.70E-06//104aa//33%//P49373 OCBBF20017060

PANCR10000210//PROTEIN DISULFIDE ISOMERASE PRECURSOR (PDI) (EC 5.3.4.1) (PROLYL 4- HYDROXYLA-SE BETA SUBUNIT) (CELLULAR THYROID HORMONE BINDING PROTEIN) (P55).//9.10E-31//231aa//33%//P05307

55 PANCR10001850 PEBLM10000290

PEBLM10000340//RNA-BINDING PROTEIN EWS.//1.80E-284//615aa//83%//Q01844

PEBLM10000680//ACTIN, CYTOPLASMIC TYPE 5.//1.30E-70//158aa//86%//P53505 PEBLM10001440//Trg//2.40E-

212//385aa//60%//GAA48220

PEBLM10001800

PEBLM20000300

PEBLM20001t20//Homo sapiens nucleotide-binding site protein 1 mRNA, complete cds.//1.90E-127//899aa//34%//

5 AF298547

PEBLM20001260

PEBLM20001470

PEBLM20002130//Mus musculus genes for integrin aM290, hapsin, partial and comp I ete cds.//8.20E-44//246aa//47%//AB036930

PEBLM20002480//ZINC FINGER PROTEIN 157.//8.70E-71//210aa//47%//P51786 PEBLM20002700//Homo sapiens tissue-type bone marrow zinc finger protein 4 mRNA, complete cds.//6.70E-237//537aa//80%//AF070651

PEBLM20003080//ZINC FINGER PROTEIN 135.//2.40E-133//335aa//65%//P52742

PEBLM20003950//ZINC FINGER PROTEIN 165.//3.20E-35//143aa//59%//P49910

PEBLM20004790//PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FYN (EC 2.7.1.112) (P59-FYN).//4.70E-

15 264//410aa//95%//P39688

PLACE50000370//Homo sapiens mRNA for hVPS11, complete cds.//1.80E-149//281aa//98%//AB027508

PLACE50000580//PUTATIVE IMPORTIN BETA-4 SUBUNIT (KARYOPHERIN BETA-4 SUBUNIT).//9.60E-76//937aa// 27%//060100

PLACE50000670

PLACE50000680//C4B-BINDING PROTEIN PRECURSOR (C4BP).//5.10E-09//136aa//30%//P08607

PLACE50000800//Human non-lens beta gamma-crystallin like protein (AIM1) mRNA, partial cds.//0//840aa//99%// U83115

PLACE50001050//Mus musculus mRNA for heparan sulfate 6-sulfotransferase 2, complete cds.//6.10E-236//300aa//89%//AB024565

PLACE50001130//GLUCOAMYLASE S1/S2 PRECURSOR (EC 3.2.1.3) (GLUCAN 1,4-ALPHA-GLUCOSIDASE) (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE).//2.20E-23//729aa//24%//P08640

PLACE50001530

PLACE50001700//DNAK PROTEIN (HEAT SHOCK PROTEIN 70) (HSP70).//3.00E-05//108aa//30%//Q56235

PLACE60000440

30 PLACE60000700

PLACE60000800

PLACE60001370

PLACE60002050//TRANSCRIPTIONAL REPRESSOR PROTEIN YY1 (YIN AND YANG 1) (YY-1) (DELTA TRANSCRIPTION FACTOR) (NF-E1).//6.00E-73//212aa//66%//P25490

35 PLACE60002630

PLACE60003710

PLACE60003790//PUTATIVE PRE-MRNA SPLICING FACTOR RNA HELICASE (DEAH BOX

PROTEIN 15) (ATP-DEPENDENT RNA HELICASE #46).//5.30E-104//191aa//99%//043143

PLACE60004240

40 PLACE60004290

PLACE60005230

PLACE60005500

PLACE60005550//Human (c-myb) gene, complete primary cds, and five complete alternatively spliced cds.//4.60E-20//71aa//66%//U22376

45 PLACE60009530

PLACE60012810//Probable acyl-CoA synthetase (EC 6.2.1.-) - Mycobacterium tuberculosis (strain H37RV)//3.00E-11//600aa//24%//C70669

PLACE60012940

PLACE60014430//Homo sapiens mRNA for MOCS1A & MOCS1B proteins, complete CDSs.//1.60E-146//283aa//

50 98%//AJ224328

PLACE60018860//ADENYLATE CYCLASE, TYPE IV (EC 4.6.1.1) (ATP PYROPHOSPHATE-LYASE) (ADENYLYL CYCLASE).//1.30E-244//504aa//90%//P26770

PLACE60019230

PLACE60019250

5 PLACE60020160

PLACE60020840//CYTOCHROME B561 (CYTOCHROME B-561).//1.00E-45//211aa//47%//Q95245

PLACE60021020

PLACE60021510//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//5.00E-140//351aa//61%//P51523

PLACE60024190//TRICHOHYALIN.//1.40E-09//299aa//24%//P37709

PLACE60026680//Homo sapiens Arg/Abl-interacting protein ArgBP2b (ArgBP2b) mRNA, partial cds.//1.00E-254//484aa//96%//AF049885

PLACE60026920

5 PLACE60026990//Human PMS2 related (hPMSR6) mRNA, complete cds.//5.70E-42//112aa//75%//U38980 PLACE60029490

PLACE60030380//ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2).//3.60E-34//335aa//30%//P51523

PLACE60030940 PLACE600310

10 PLACE60032040

PLACE60033720

PLACE60033990//SPIDROIN 1 (DRAGLINE SILK FIBROIN 1) (FRAGMENT).//1.40E-08//234aa//27%//P19837

PLACE60037050

PLACE60037400

15 PLACE60037450

PLACE60038500//Homo sapiens mitochondrial solute carrier mRNA, complete cds.//5.10E-65//171aa//70%// AF155660

PLACE60040050

PLACE60043120

PLACE60043360

PLACE60043960

PLACE60043970//Takifugu rubripes retinitis pigmentosa GTPase regulator-like protein gene, partial cds.//2.60E-14//329aa//21%//AF286475

PLACE60044540//GLUCOAMYLASE S1/S2 PRECURSOR (EC 3.2.1.3) (GLUCAN 1,4-ALPHA-GLUCOSIDASE)

25 (1,4-ALPHA-D-GLUCAN GLUCOHYDROLASE).//1.90E-46//865aa//26%//P08640

PLACE60044640//Human placenta (Diff48) mRNA, complete cds.//2.60E-88//414aa//45%//U49187

PLACE60044910

PLACE60046630

PLACE60046870

30 PLACE60047380

PLACE60049310

PLACE60049930

PLACE60050290 PROST10001520

PROST10001670//SYNAPSIN I (BRAIN PROTEIN 4.1).//2.20E-07//239aa//28%//P17600

PROST10002200

PROST10002460

PROST10002720//Home sapiens mRNA for calsyntenin-2 (CS2 gene).//7.00E-23//153aa//42%//AJ278018 PROST10003430//Numb-binding protein LNXp80//0//732aa//87%//T09457

40 PROST10005260

PROST10005360//Homo sapiens contactin associated protein (Caspr) mRNA, complete cds.//1.30E-152//719aa//38%//U87223

PROST10005640

PROST20000360

45 PROST20000530//60S RIBOSOMAL PROTEIN L13A (23 KDA HIGHLY BASIC PROTEIN).//2.00E-33//73aa//95%//

PROST20001760//RD PROTEIN (WL623).//7.30E-12//104aa//41%//P19426

PROST20002060

PROST20002670

50 PROST20002730//H4(D10S170) PROTEIN.//2.60E-63//118aa//98%//Q16204

PROST20002740

PROST20003250//Homo sapiens DAZ associated protein 1 (DAZAP1) mRNA, complete cds.//2.50E-150//264aa// 98%//AF181719

PROST20004630

55 PROST20017390

PROST20017960

PROST20018230//TRANSCRIPTION FACTOR SP1.//4.60E-59//287aa//42%//Q01714

PROST20018990//Human Rar protein mRNA, complete cds.//1.20E-127//278aa//88%//U05227

PROST20019980

PROST20021620

PROST20023380//Cca3 protein//5.20E-68//142aa//94%//T31081

PROST20025910

5 PROST20026820//DENTIN MATRIX ACIDIC PHOSPHOPROTEIN 1 PRECURSOR (DENTIN MATRIX PROTEIN-1) (DMP-1) (AG1).//6.90E-05//255aa//27%//055188

PROST20028420

PROST20029600//Human butyrophilin (BTF1) mRNA, complete cds.//2.00E-61//144aa//87%//U90543 PROST20031020

10 PROST20031170//DNA BINDING PROTEIN URE-B1 (EC 6.3.2.-).//1.70E-23//282aa//27%//P51593

PROST20032100

PROST20032320//BETA-GLUCURONIDASE PRECURSOR (EC 3.2.1.31) (BETA-G1).//1.20E-18//46aa//91%//P08236

PROST20033020

15 PROST20033030

PROST20033380//KINESIN LIGHT CHAIN (KLC).//7.70E-08//146aa//27%//P46824

PROST2OO334OO//SERINE/THREONINE-PROTEIN KINASE 9 (EC 2.7.1.-).//1.80E-25//55aa//100%//076039

PROST20034720//IMMEDIATE-EARLY PROTEIN.//7.80E-11//180aa//24%//Q01042

PROST20037320

20 PROST20039220

PROST20043320//Homo sapiens mRNA for BAP2-beta protein, complete cds.//3.70E-227//431aa//99%//AB015020 PROST20044160//TROPOMYOSIN 5, CYTOSKELETAL TYPE.//7.80E-48//100aa//97%//P21107

PROST20044810

PROST20051210//PROBABLE PROTEIN PHOSPHATASE 2C T23F11.1 (EC 3.1.3.16) (PP2C).//7.00E-16//74aa//

25 41%//P49596

PROST20051430

PROST20054260

PROST20056040

PROST20058800

PROST20059190//Human breast cancer, estrogen regulated LIV-1 protein (LIV-1) mRNA, partial cds. //1. 50E-28// 109aa//55%//U41060

PROST20059430

PROST20061960

PROST20062600//SPLICING FACTOR, ARGININE/SERINE-RICH 4 (PRE-MRNA SPLICING FACTOR SRP75).//
2.20E-07//269aa//22%//Q08170

PR0ST20064500//N-HYDROXYARYLAMINE SULFOTRANSFERASE (EC 2.8.2.-) (HAST-I).//9.10E-38//102aa//70%//P50237

PROST20067370//H.sapiens mRNA for XIAP associated factor-1.//2.40E-122//223aa//99%//X99699

PROST20069880//Mus musculus DXImx48e protein (DXImx48e) mRNA, complete cds.//9.6e-316//750aa//79%//

40 AF229644

PROST20072370

PROST20072890//TUMOR NECROSIS FACTOR, ALPHA-INDUCED PROTEIN 1, ENDOTHELIAL (B12 PROTEIN).// 1.50E-117//314aa//70%//Q13829

PROST20073170//Rattus norvegicus zinc finger protein RIN ZF mRNA, complete cds.//1.80E-268//559aa//87%//
5 AF091457 PROST20073890//VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR PERMEABILITY FACTOR) (VPF).//5.30E-33//63aa//98%//P15692

PROST20079740//ANTER-SPECIFIC PROLINE-RICH PROTEIN APG (PROTEIN CEX) (FRAGMENT).//4.10E-09//97aa//36%//P40603

PROST20085160//TROPOMYOSIN, CYTOSKELETAL TYPE (TM30-NM).//2.10E-93//220aa//87%//P12324

50 PROST20094830

PUAEN10000570

PUAEN10000810

PUAEN10001610//GENERAL NEGATIVE REGULATOR OF TRANSCRIPTION SUBUNIT 1.//2.10E-68//448aa//32%// P25655

55 PUAEN10003220

SALGL10000050

SALGL10000470//NG36 [Homo sappiens]//3.00E-53//184aa//96%//AAD21811

SALGL10000650//POLYHOMEOTIC-PROXIMAL CHROMATIN PROTEIN.//4.60E-08//71aa//43%//P39769

SALGL10001570//APOLIPOPROTEIN L PRECURSOR (APO-L).//5.10E-99//338aa//61%//014791

SKMUS10000140//Polyubiquitin 9 - human.//2.10E-199//280aa//96%//M26880

SKMUS10000220//NUCLEAR PORE PROTEIN SEH1 HOMOLOG.//2.00E-58//346aa//39%//Q10099

 $SKMUS10000640//Mus\ musculus\ RING-finger\ protein\ MURF\ mRNA,\ complete\ cds.//4.10E-111//348aa//60\%//Musculus\ ringer protein\ MURF\ mRNA,\ complete\ cds.//4.10E-111//348aa//60\%//Musculus\ ringer protein\ MURF\ mRNA,\ complete\ cds.//4.10E-111//348aa//60\%//Musculus\ ringer protein\ MURF\ mRNA,\ complete\ cds.//4.10E-111//348aa//60\%//Musculus\ ringer protein\ musculus\ ringer protein\ ringer protein\ musculus\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer protein\ ringer pro$ 

5 AF294790

SKMUS10001040//Homo sapiens mRNA for HEXIM1 protein, complete cds.//2.40E-49//256aa//47%//AB021179 SKMUS10001180//Homo sapiens t(3;5)(q25.1;p34) fusion gene NPM-MLF1 mRNA, complete cds.//3.60E-126//258aa//94%//L49054

SKMUS10001240

10 SKMUS10001290/ISOPENTENYL-DIPHOSPHATE DELTA-ISOMERASE (EC 5.3.3.2) (IPP ISOMERASE) (ISOPEN-TENYL PYROPHOSPHATE ISOMERASE).//4.10E-81//227aa//64%//Q13907

SKMUS10001770//PROTEIN-L-ISOASPARTATE O-METHYLTRANSFERASE (EC 2.1.1.77) (PROTEIN- BETA-AS-PARTATE METHYLTRANSFERASE) (PIMT) (PROTEIN L-ISOASPARTYL

METHYLTRANSFERASE) (L-ISOASPARTYL PROTEIN CARBOXYL

15 METHYLTRANSFERASE).//2.50E-18//213aa//29%//026915

SKMUS20000740//Homo sapiens methyltransferase C0Q3 (C0Q3) mRNA, complete cds.//8.50E-166//309aa//99%// AF193016

SKMUS20001170//Homo sapiens MAGEF1 (MAGEF1) mRNA, complete cds.//1.50E-74//305aa//50%//AF295378 SKMUS20002710

20 SKMUS20003430

SKMUS20003650//Human (p23) mRNA, complete cds.//7.00E-20//110aa//39%//L24804 SKMUS20003900//Homo sapiens 38 kDa Mov34 homolog mRNA, complete cds.//1.20E-152//286aa//99%//U70734 SKMUS20004580//Mus musculus N-RAP mRNA, complete cds.//4.50E-160//591aa//56%//U76618 SKMUS20004670

25 SKMUS20004680

SKMUS20007240//Homo sapiens mRNA for 2-hydroxyphytanoyl-CoA lyase.//2.60E-148//318aa//88%//AJ131753 SKMUS20007740//BALBIANI RING PROTEIN 1 (GIANT SECRETORY PROTEIN I-A) (GSP-IA) (FRAGMENT).// 1.30E-08//138aa//26%//P02849

SKMUS20008470

30 SKMUS20008630//PROBABLE ASPARAGINYL-TRNA SYNTHETASE (EC 6.1.1.22) (ASPARAGINE--TRNA LIGASE) (ASNRS).//1.10E-103//445aa//46%//P52276

SKMUS20009020//BR01 PROTEIN.//2.30E-08//232aa//26%//P48582

SKMUS20009330//RNA polymerase III subunit [Homo sapiens]//1.80E-44//216aa//47%//U93868 SKMUS20009450

35 SKMUS20009540//Homo sapiens F-box protein Fbx25 (FBX25) mRNA, partial cds.//4.20E-93//263aa//64%// AF174605

SKMUS20010080//Mus musculus mRNA for a skeletal muscle and cardiac protein.//1.00E-75//178aa//87%//AJ011118 SKMUS20011290//NAD-DEPENDENT METHANOL DEHYDROGENASE (EC 1.1.1.244) (MEDH).//3.70E-45//195aa//32%//P31005

40 SKMUS20011470//Mus musculus RP42 mRNA, complete cds.//1.30E-32//186aa//36%//AF198092 SKMUS20013640

SKMUS20014920//Zinc finger protein//4.40E-05//153aa//24%//T37771

SKMUS20015010

SKMUS20015430//Homo sapiens HDCMC29P mRNA, partial cds.//3.50E-128//248aa//97%//AF068295

45 SKMUS20016080

SKMUS20016310

SKMUS20016340//HIGH MOBILITY GROUP PROTEIN HMG2 (HMG-2).//6.00E-11//170aa//25%//P26583 SKMUS20016620//Oryctolagus cuniculus CARP mRNA, complete cds.//2.70E-43//196aa//51%//AF131883 SKMUS20016680//Neuron-specific signal trunduction protein Stac//8.30E-33//218aa//38%//NP\_058549

50 SKMUS20016710

SKNMC10000070

SKNMC10000100

SKNMC10000190

SKNMC10000290

SKNMC10001100

SKNMC10001590

SKNMC10001680

SKNMC10002290

SKNMC10002510//Homo sapiens MT-ABC transporter (MTABC) mRNA, complete cds.//0//672aa//93%//AF076775 SKNMC10002640

SKNMC20000650//ZINC FINGER PROTEIN 136.//7.20E-05//311aa//23%//P52737

SKNMC20000970//M.musculus mRNA for protein Htf9C.//9.80E-220//552aa//75%//X56044

5 SKNMG20002240//ZINC FINGER PROTEIN 228.//1.80E-68//226aa//53%//Q9UJU3

SKNMC20003050

SKNMC20003220//MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B).//3.70E-10// 153aa//32%//P07199

SKNMC20003560//Mus musculus Max-interacting transcriptional repressor (Mad3) mRNA, complete cds.//1.90E-72//

10 168aa//86%//U32394

SKNMC20005930

SKNMC20006120

SKNMC20010570

SKNMC20011130//Rattus norvegicus golgi peripheral membrane protein p65 (GRASP65) mRNA, complete cds.//

15 6.90E-90//244aa//66%//AF015264

SKNMC20015030//P-SELECTIN GLYCOPROTEIN LIGAND 1 PRECURSOR (PSGL-1) (SELECTIN P LIGAND).// 3.60E-11//152aa//32%//Q62170

SKNMC20015550

SKNMC20015960//Homo sapiens mRNA for ANKHZN, complete cds.//0//1046aa//95%//AB037360

20 SKNSH10000860

SKNSH10001740//ORNITHINE DECARBOXYLASE (EC 4.1.1.17) (ODC).//9.00E-102//352aa//53%//P00860 SKNSH10003010//Homo sapiens DRC3 mRNA, complete cds.//3.00E-154//305aa//91%//AF282167 SKNSH10003080

SKNSH20001510

25 SKNSH20001630

SKNSH20003470//CYTOCHROME B2 PRECURSOR (EC 1.1.2.3) (L-LACTATE DEHYDROGENASE (CYTO-CHROME)) (L-LACTATE FERRICYTOCHROME C OXIDOREDUCTASE) (L-LCR).//2.60E-07//107aa//32%//P00175 SMINT10000160//2-HYDROXYACYLSPHINGOSINE 1-BETA-GALACTOSYLTRANSFERASE PRECURSOR (EC 2.4.1.45) (UDP-GALACTOSE-CERAMIDE GALACTOSYLTRANSFERASE)

(CERAMIDE UDP-GALACTOSYLTRANSFERASE) (CEREBROSIDE SYNTHASE).//3.80E-71//492aa//33%//064676 SMINT10000390

SMINT10000420//ATP-BINDING CASSETTE, SUB-FAMILY A, MEMBER 3 (ATP-BINDING CASSETTE TRANSPORTER 3) (ATP-BINDING CASSETTE 3) (ABC-C TRANSPORTER).//2.70E-92//662aa//34%//

35 SMINT10000540

SMINT10000570//Homo sapiens leucocyte immunoglobulin-like receptor-8 (LIR-8) mRNA, complete cds.//5.30E-212//481aa//84%//AF025534

SMINT10000710

SMINT10001000//PAIRED MESODERM HOMEOBOX PROTEIN 2B (PAIRED-LIKE HOMEOBOX 2B) (PHOX2B HOMEODOMAIN PROTEIN) (NEUROBLASTOMA PHOX) (NBPHOX).//1.60E-05//87aa//39%//Q99453

SMINT10001030//Homo sapiens ankyrin repeat-containing protein ASB-2 mRNA, complete cds.//1.20E-292//546aa//99%//AF159164

SMINT10001180

SMINT20000180

45 SMINT20000400

SMINT20001450//Halocynthia roretzi mRNA for HrPET-3, complete cds.//2.30E-20//125aa//40%//AB029335 SMINT20002270

SMINT20002390

SMINT20002770//BUTYROPHILIN PRECURSOR (BT).//3.20E-51//269aa//41%//P18892

50 SMINT20003960//A kinase anchor protein AKAP-KL isoform 2 //5.00E-254//738aa//70%//T09226 SMINT20004000//Homo sapiens FRG1 mRNA, complete cds.//7.00E-52//116aa//90%//L76159 SMINT20005450//Mus musculus Zfp228 (Znf228) mRNA, complete cds.//1.20E-31//125aa//49%//AF282919 SMINT20005580 SPLEN10000490

55 SPLEN1000910//Homo sapiens HRIHFB2007 mRNA, partial cds.//5.20E-95//199aa//90%//AB015330 SPLEN10001430//HIGH MOBILITY GROUP PROTEIN HMG1 (HMG-1).//3.00E-78//147aa//100%//P09429 SPLEN20000200//Human (c-myb) gene, complete primary cds, and five complete alternatively spliced cds.//3.10E-11//64aa//57%//U22376

SPLEN20000470

SPLEN20000720//ZINC FINGER PROTEIN CKR1.//3.10E-37//235aa//37%//P30373

SPLEN20001340//CARBOXYPEPTIDASE S PRECURSOR (EC 3.4. 17.4) (YSCS) (GLY-X CARBOXYPEPTIDASE).// 3.30E-29//250aa//37%//P27614

5 SPLEN20001970//SPLICING FACTOR, ARGININE/SERINE-RICH 4 (PRE-MRNA SPLICING FACTOR SRP75).// 2.70E-14//243aa//28%//Q08170

SPLEN20002420

SPLEN20002430

SPLEN20002670//Rattus norvegicus TGF-beta resistance-associated protein (TRAG) mRNA, complete cds.//0//
559aa//84%//AF305813

SPLEN20002700

SPLEN20003100

SPLEN20003570//Mus musculus RaIGDS-like protein 3 mRNA, complete cds.//8.30E-191//453aa//81%//AF237669

SPLEN20004430

15 SPLEN20004960

SPLEN20005410

STOMA10000470

STOMA10000520

STOMA10001170

20 STOMA10001330

STOMA10001860//CYTOSOLIC ACYL COENZYME A THIOESTER HYDR0LA (EC 3.1.2.2)

(LONG CHAIN ACYL-COA THIOESTER HYDROLASE) (CTE-II).//2.70E-173//328aa//99%//000154

STOMA20000320

STOMA20000880//IG LAMBDA CHAIN C REGIONS.//1.50E-51//105aa//96%//P01842

25 STOMA20001210//Fugu rubripes CCBL1 gene, exons 1 to 12.//1.90E-127//415aa//55%//Y17462

STOMA20001880

STOMA20002570

STOMA20002890

STOMA20003960//LIM-ONLY PROTEIN 6 (TRIPLE LIM DOMAIN PROTEIN 6).//3.60E-59//352aa//39%//043900

30 STOMA20004780

STOMA20004820//1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase (EC 3. 1. 4. 11) delta-2//6.90E-148// 325aa//84%/S14113

SYNOV10001280//Homo sapiens colon cancer-associated protein Mic1 (MIC1) mRNA, complete cds.//1.1e-316//609aa//97%//AF143536

35 SYNOV10001640

SYNOV20001770

SYNOV20002910//Arabinogalactan-like protein//2.90E-07//124aa//31%//S52994

SYNOV20008200//Trichoplusia ni transposon IFP2.//4.10E-13//254aa//27%//J04364 SYNOV20010140//Mus musculus Zfp228 (Znf228) mRNA, complete cds.//2.50E-31//125aa//49%//AF282919

40 SYNOV20011440

SYNOV20013740//ZINC FINGER PROTEIN 134.//1.80E-108//332aa//53%//P52741

SYNOV20014510//MYOCYTE-SPECIFIC ENHANCER FACTOR 2B (SERUM RESPONSE FACTOR-LIKE PROTEIN 2) (XMEF2) (RSRFR2).//6.40E-140//302aa//88%//Q02080

SYNOV20014570

45 SYNOV20016480//THYMIDINE PHOSPHORYLASE PRECURSOR (EC 2.4.2.4) (TDRPASE) (TP) (PLATELET-DE-RIVED ENDOTHELIAL CELL GROWTH FACTOR) (PD-ECGF) (GLIOSTATIN).//2.80E-35//69aa//100%//P19971 TESTI10000230

TESTI10000250//M.musculus mRNA for testis-specific protein, DDC8.//2.60E-68//462aa//42%//Y09878 TESTI10000420//PARAMYOSIN (ANTIGEN SJ97).//2.50E-08//367aa//23%//Q05870

50 TESTI10000510//CYTADHERENCE HIGH MOLECULAR WEIGHT PROTEIN 2 (CYTADHERENCE ACCESSORY PROTEIN 2).//4.00E-13//648aa//22%//P75471

TESTI10000550//HOMEOBOX PROTEIN SIX1 (FRAGMENT).//8.90E-11//199aa//30%//Q62231

TESTI10000640//Fugu rubripes sex comb on midleg-like 2 protein (SCML2) gene, complete cds.//2.20E-140//513aa//49%//AF146688

TESTI10000700//Rattus norvegicus deubiquitinating enzyme Ubp69 (ubp69) mRNA, complete cds.//7.00E-297//618aa//88%//AF106659

TESTI10000960

TESTI10001250

TESTI10001270//POLYCYSTIN PRECURSOR (AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE PROTEIN 1).//3.60E-11//161aa//33%//P98161

TESTI10001310//Homo sapiens TCP11 (TCP11) mRNA, complete cds.//1.90E-223//425aa//100%//AF269223 TESTI10001380//NEUROENDOCRINE CONVERTASE 3 PRECURSOR (EC 3.4.21.61) (NEC 3)

5 (PC4) (PROHORMONE CONVERTASE 3) (KEX2-LIKE ENDOPROTEASE 3).//1.10E-140//303aa//85%//P29121 TESTI10001630

TESTI10001680//PROTEIN PHOSPHATASES PP1 REGULATORY SUBUNIT SDS22.//4.30E-14//158aa//35%//P36047

TESTI10001790

10 TESTI10001910//Homo sapiens 88-kDa Golgi protein (GM88) mRNA, complete cds.//8.70E-77//274aa//59%// AF204231

TESTI20000180

TESTI20000440//TRICHOHYALIN.//3.00E-16//476aa//26%//P22793

TESTI20001200//Homo sapiens mRNA for zinc finger 3 (ZF3 gene).//6.90E-13//108aa//40%//X60153

15 TESTI20001540//PUTATIVE SERINE/THREONINE-PROTEIN KINASE D1044.3 IN CHROMOSOME III (EC 2.7.1.-).// 1.30E-32//103aa//48%//P41951

TESTI20001770//INTER-ALPHA-TRYPSIN INHIBITOR HEAVY CHAIN H3 PRECURSOR (ITI

HEAVY CHAIN H3) (SERUM-DERIVED HYALURONAN-ASSOCIATED PROTEIN) (SHAP).//5.10E-05//157aa//22%//Q06033

20 TESTI20001790

TESTI20001840//SIT4-ASSOCIATING PROTEIN SAP185.//7.90E-08//109aa//33%//P40856

TESTI20002070//NIFU-LIKE PROTEIN.//3.60E-43//105aa//80%//Q9ZD61

TESTI20002080//Homo sapiens mRNA for Gab2, complete cds.//7.60E-62//222aa//60%//AB018413 TESTI20002380

25 TESTI20002530//Homo sapiens A1U mRNA, complete cds.//6.60E-17//220aa//31%//AF188240

TESTI20003560//TUBULIN ALPHA-3/ALPHA-7 CHAIN.//2.00E-40//119aa//73%//P05214

TESTI20003720

TESTI20004350//CALDESMON (CDM).//1.20E-09//180aa//23%//P12957

TESTI20004620

30 TESTI20005200

TESTI20005910//ADENYLATE KINASE, CHLOROPLAST (EC 2.7.4.3) (ATP-AMP TRANSPHOSPHORYLASE).// 3.60E-34//209aa//37%//P43188

TESTI20006000//RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170)

(REED- STERNBERG INTERMEDIATE FILAMENT ASSOCIATED PROTEIN).//6.80E-21//196aa//32%//P30622

35 TESTI2O006270

TESTI20006710

TESTI20006950//KINESIN HEAVY CHAIN.//7.80E-07//391aa//22%//P21613

TESTI20006990//KINESIN-LIKE PROTEIN KIF2 (KINESIN-2) (HK2).//2.00E-184//539aa//63%//000139

TESTI20007070//DOUBLESEX PROTEIN, MALE-SPECIFIC.//3.00E-13//163aa//31%//P23023

40 TESTI20007620//DRA PROTEIN (DOWN-REGULATED IN ADENOMA).//1.60E-09//88aa//38%//P40879

TESTI20007840//PUTATIVE IMPORTIN BETA-4 SUBUNIT (KARYOPHERIN BETA-4

SUBUNIT).//6.00E-89//1092aa//26%//060100

TESTI20008190

TESTI20008300

45 TESTI20008490//MYOSIN HEAVY CHAIN, CLONE 203 (FRAGMENT).//4.90E-09//331aa//24%//P39922

TESTI20008830//MYOSIN-BINDING PROTEIN C, SLOW-TYPE (SLOW MYBP-C) (C-PROTEIN, SKELETAL MUS-CLE SLOW-ISOFORM).//4.20E-88//162aa//100%//Q00872

TESTI20009090

TESTI20009510

50 TESTI20009700

TESTI20010080

TESTI20010490//HYPOTHETICAL ZINC FINGER PROTEIN KIAA0961.//2.70E-155//504aa//56%//Q9Y2G7

TESTI20010820

TESTI20011340

55 TESTI20011410//Rattus norvegicus actin-filament binding protein Frabin mRNA, complete cds.//0//766aa//83%// AF038388

TESTI20011800//TRICHOXYALIN.//5.80E-07//322aa//22%//Q07283

TESTI20012370//RING CANAL PROTEIN (KELCH PROTEIN).//1.60E-38//438aa//26%//Q04652

TESTI20012690//DIHYDROLIPOAMIDE ACETYLTRANSFERASE COMPONENT OF PYRUVATE DEHYDROGENASE COMPLEX, MITOCHONDRIAL PRECURSOR (EC 2.3.1.12) (E2) (PDC-E2) (70 KDA MITOCHONDRIAL AUTOANTIGEN OF PRIMARY BILIARY CIRRHOSIS) (PBC) (M2 ANTIGEN COMPLEX 70 KDA SUBUNIT).//3.40E-308//575aa//99%//P10515

5 TESTI20013060

TESTI20013300//Homo sapiens NY-REN-60 antigen mRNA, partial cds.//1.10E-172//315aa//99%//AF155116 TESTI20013450//M.musculus Tenr mRNA for RNA binding protein.//3.00E-273//576aa//88%//X84693 TESTI20013520

TESTI20014120//TRICHOHYALIN.//1.40E-28//370aa//27%//P37709

TESTI20014200//D.melanogaster mRNA for putative organic cation transporter,

2064 bp.//4.20E-54//357aa//33%//Y12400

TESTI20015110//MYOSIN II HEAVY CHAIN, NON MUSCLE.//3.50E-07//255aa//24%//P08799

TESTI20015120//TOM1 (target of myb 1)//1.00E-57//245aa//56%//NP\_005479

TESTI20015560//ZING FINGER PROTEIN 151 (MYC-INTERACTING ZINC FINGER PROTEIN) (MIZ-1 PROTEIN).//

15 9.50E-16//278aa//28%//Q13105

TESTI20015930

TESTI20016210

TESTI20016610//DYNEIN BETA CHAIN, FLAGELLAR OUTER ARM.//1.10E-17//432aa//25%//Q39565

TESTI20016650//IMMEDIATE-EARLY PROTEIN.//9.50E-06//111aa//28%//Q01042

20 TESTI20016710

TESTI20017580

TESTI20017660

TESTI20017920

TESTI20018150//GASTRULA ZINC FINGER PROTEIN XLCGF7.1 (FRAGMENT).//7.20E-13//98aa//37%//P18735

25 TESTI20018260

TESTI20018270//TRANSKETOLASE (EC 2.2.1.1) (TK) (P68).//6.90E-230//614aa//67%//P40142

TESTI20018290

TESTI20018520//Homo sapiens contactin associated protein (Caspr) mRNA, complete cds.//5.40E-167//724aa//40%// U87223

30 TESTI20018620

TESTI20018690//Xenopus laevis bicaudal-C (Bic-C) mRNA, complete cds.//1.20E-08//189aa//30%//AF224746

TESTI20018790//ZINC FINGER PROTEIN 157.//8.70E-104//443aa//45%//P51786

TESTI20018980

TESTI20019500

35 TESTI20019680

TESTI20019910

TESTI20020020

TESTI20020480

TESTI20020570//Human actin-like peptide mRNA, partial cds.//6.10E-140//307aa//88%//U20582

40 TESTI20020810//HYPOTHETICAL 80.0 KDA PROTEIN IN POL1-RAS2 INTERGENIC REGION.//5.30E-40//235aa// 35%//P50944

TESTI20020900

TESTI20021050//MICRONUCLEAR LINKER HISTONE POLYPROTEIN (MIC LH) [CONTAINS: LINKER HISTONE PROTEINS ALPHA, BETA, DELTA AND GAMMA],//3.90E-11//365aa//24%//P40631

45 TESTI20021490//ZINC FINGER PROTEIN 131 (FRAGMENT).//5.30E-191//347aa//99%//P52739

TESTI20022230//Chlamydomonas reinhardtii strain 1132D- flagellar

protofilament ribbon protein (RIB43a) mRNA, complete cds.//7.70E-12//137aa//31%//AF196576

TESTI20022450

TESTI20022510

50 TESTI20022560//GUANYLATE KINASE (EC 2.7.4.8) (GMP KINASE).//2. 20E-20//188aa//31%//Q64520

TESTI20022640

TEST120022940//MOB2 PROTEIN (MPS1 BINDER 2).//4.80E-16//133aa//31%//P43563

TESTI20023610

TESTI20023690

55 TESTI20024150

TESTI20024230//PISTIL-SPECIFIC EXTENSIN-LIKE PROTEIN PRECURSOR

(PELP).//8.40E-15//155aa//34%//Q03211

TESTI20024610//TRICHOHYALIN.//3.60E-13//423aa//23%//P37709

TESTI20024650//FIBROIN HEAVY CHAIN PRECURSOR (FIB-H) (FRAGMENTS).//4.70E-06//142aa//33%//P05790 TESTI20024670

TESTI20024980//Danio rerio p55-related MAGUK protein DLG3 (dlg3) mRNA, complete cds.//2.00E-221//532aa//75%//AF124435

5 TESTI20025160//MELANOMA-ASSOCIATED ANTIGEN B1 (MAGE-B1 ANTIGEN) (MAGE-XP ANTIGEN) (DAM10). //1.40E-89//349aa//54%//P43366

TESTI20025440

TESTI20025800

TESTI20026320

10 TESTI20026760//ZINC-BINDING PROTEIN A33.//1.60E-38//235aa//37%//Q02084

TESTI20026980

TESTI20027000

TESTI20027070//PLASMA-CELL MEMBRANE GLYCOPROTEIN PC-1 [INCLUDES: ALKALINE

PHOSPHODIESTERASE I (EC 3.1.4.1); NUCLEOTIDE PYROPHOSPHATASE (EC 3.6.1.9) (NPPASE)].//1.50E-50//

15 406aa//33%//P22413

TESTI20027290//Homo sapiens mRNA for oligophrenin 1.//2.50E-56//393aa//38%//AJ001189

TESTI20027890//ZINC FINGER PROTEIN 33A (ZINC FINGER PROTEIN K0X31) (KIAA0065) (HA0946) (FRAGMENT).//9.40E-91//472aa//42%//006730

TESTI20028060

20 TESTI20028400

TESTI20028660

TESTI20029120//DUAL-SPECIFICITY TYROSINE-(Y)-PHOSPHORYLATION REGULATED KINASE (EC 2.7.1.-) (PROTEIN KINASE MINIBRAIN HOMOLOG) (HP86).//1.90E-47//253aa//41%//Q13627 TESTI20029650

25 TESTI20030050//Mus musculus taube nuss mRNA, complete cds.//1.70E-119//260aa//91%//AF222802 TESTI20030370

TESTI20030590//TESTIS-SPECIFIC PROTEIN PBS13.//1.70E-33//117aa//61%//Q01755

TESTI20030710//Homo sapiens C2H2 (Kruppel-type) zinc finger protein mRNA,

complete cds.//9.80E-18//139aa//46%//AF159567

30 TESTI20030740//TRICHOHYALIN.//8.30E-12//368aa//24%//P22793

TESTI20031090//VACUOLAR PROTEIN 8.//3.80E-23//367aa//27%//P39968

TESTI20031170//Tektin A1 [Strongylocentrotus purpuratus]//3.40E-91//397aa//45%//M97188

TESTI20031300

TESTI20031520

35 TESTI20031930

TESTI20031960

TESTI20032280

TESTI20032550

TESTI20032800

40 TEST120032990

TESTI20033250//SALIVARY PROLINE-RICH PROTEIN PRECURSOR (CLONE CP7) [CONTAINS: BASIC PEPTIDE P-FI (FRAGMENT).//4.50E-05//138aa//28%//P02812

TESTI20033270//Testis-specific protein [Homo sapiens].//1.00E-22//120aa//47%//NP\_067063 TESTI20033540//TRI-CHOHYALIN.//1.80E-13//443aa//22%//P37709

45 TESTI20033560

TESTI20033760

TESTI20034130//Zinc finger protein 106//9.30E-263//781aa//66%//T14273

TESTI20034180

TESTI20034190//Homo sapiens very long-chain acyl-CoA synthetase (BG1) mRNA, complete cds.//3.00E-131// 468aa//53%//AF179481

TESTI20034980//TRIPLE FUNCTIONAL DOMAIN PROTEIN//1.00E-77//250aa//55%//075962

TESTI20035120//SYNAPTONEMAL COMPLEX PROTEIN 1 (SCP-1 PROTEIN).//9.30E-06//459aa//20%//062209 TESTI20035410

TESTI20035510//Proliferating-cell nucleolar antigen P120-like protein - Archaeoglobus fulgidus.//3.00E-12//200aa// 35%//F69504

TESTI20035740//A-KINASE ANCHOR PROTEIN 150 (AKAP 150) (CAMP-DEPENDENT PROTEIN KINASE REGULATORY SUBUNIT II HIGH AFFINITY BINDING PROTEIN) (P150) (FRAGMENT).//4.50E-09//357aa//21%//P24587 TESTI20035800

TESTI20035890

TESTI20036250//IMMEDIATE-EARLY PROTEIN.//1.60E-07//120aa//35%//Q01042

TESTI20036490//GLYCOPROTEIN X PRECURSOR.//7.40E-06//107aa//31%//P28968

TESTI20037270

5 TESTI20037810

TESTI20038940

TESTI20039140//Tektin A1//2.10E-66//410aa//36%//A46170

TESTI20039980//T-CELL RECEPTOR BETA CHAIN ANA 11.//4.40E-13//123aa//40%//P06333

TESTI20040000//Rattus norvegicus cca2 mRNA, complete cds.//5.60E-82//179aa//86%//AB000199

10 TESTI20040310

TESTI20041110

TESTI20041220//Babesia bigemina 200 kDa antigen p200 mRNA, partial cds.//4.60E-05//481aa//19%//AF142406

TESTI20042070//Columba livia mRNA for 5'-nucleotidase.//8.20E-113//317aa//67%//AJ131243

TESTI20042290//MHC CLASS II TRANSACTIVATOR G!ITA.//6.30E-05//89aa//43%//P79621

15 TESTI20042430

TESTI20042870//X INACTIVE SPECIFIC TRANSCRIPT PROTEIN (FRAGMENT).//2.40E-06//155aai/32%//P27571 TESTI20042950//AMINOPEPTIDASE B (EC 3.4.11.6) (ARGINYL AMINOPEPTIDASE)

(ARGININE AMINOPEPTIDASE) (CYTOSOL AMINOPEPTIDASE IV) (AP-B).//4.40E-19//141aa//33%//009175

TESTI20047120//POTENTIAL PHOSPHOLIPID-TRANSPORTING ATPASE IK (EC 3.6.1.-) (FRAGMENT).//1. 00E-

20 86//169aa//98%//060423

TESTI20049290

TESTI20049820//CGMP-DEPENDENT PROTEIN KINASE 1, ALPHA ISOZYME (EC 2.7.1.37) (CGK 1 ALPHA) (CG-KI-ALPHA).//6.60E-07//187aa//26%//Q13976

TESTI20049940

25 TESTI20051550

TESTI20052680//Rattus norvegicus RSD-6 mRNA, complete cds.//4.20E-61//261aa//55%//AF271155

TESTI20053960//ZINC FINGER PROTEIN 132.//0//589aa//99%//P52740

TESTI20054080//SER/THR-RICH PROTEIN T10 IN DGCR REGION.//4.90E-117//263aa//82%//P54797

TESTI20054920

30 TESTI20055840//Homo sapiens Tandem PH Domain Containing Protein-1 mRNA, complete cds.//2.70E-162//331aa//92%//AF286160

TESTI20056900//ENVELOPE GLYCOPROTEIN GP340 (MEMBRANE ANTIGEN) (MA) [CONTAINS: GLYCOPROTEIN GP220].//1.50E-06//171aa//32%//P03200

TESTI20057310//CHROMOSOME SCAFFOLD PROTEIN SCII.//1.90E-05//297aa//20%//Q90988

35 TESTI20057420//ENDOZEPINE-RELATED PROTEIN PRECURSOR (MEMBRANE-ASSOCIATED

DIAZEPAM BINDING INHIBITOR) (MA-DBI).//5.20E-225//501aa//83%//P07106

TESTI20058600//MYELOID UPREGULATED PROTEIN.//2.20E-68//167aa//74%//035682

TESTI20062380

TESTI20062550

40 TEST120064250

TESTI20064830//Homo sapiens RAN binding protein 16 mRNA, complete cds.//5.00E-163//414aa//64%//AF064729 TESTI20065720//PROTEIN D52 (N8 PROTEIN).//1.00E-22//129aa//46%//P55327

TESTI20067740

TESTI20068660//Homo sapiens infertility-related sperm protein mRNA, complete cds.//5.90E-197//365aa//99%//

45 AF311312

TESTI20068720

TESTI20069780

TESTI20069790

TESTI20071830//Homo sapiens transcriptional intermediary factor 1 gamma mRNA, complete cds.//1.40E-125// 233aa//99%//AF119043

TESTI20073580

TESTI20074020

TESTI20074640//ZINC FINGER PROTEIN 85 (ZINC FINGER PROTEIN HPF4) (HTF1).//3.20E-119//428aa//45%//

55 TESTI20074660//ZING FINGER PROTEIN 91 (ZINC FINGER PROTEIN HTF10) (HPF7).//1.30E-194//509aa//68%//Q05481

TESTI20074800

TESTI20076130

TESTI20077490

TESTI20077500

TESTI20078140//D7 PROTEIN.//1.10E-25//99aa//49%//P13007

TESTI20078640//Homo sapiens zinc finger protein ZNF232, exon 4 and complete cds.//2.60E-61//119aa//99%//

5 AF080171

TESTI20078670//RING CANAL PROTEIN (KELCH PROTEIN).//8.90E-09//269aa//20%//Q04652

TESTI20078720//INTRACELLULAR PROTEIN TRANSPORT PROTEIN US01.//2.90E-17//417aa//24%//P25386

TESTI20079510//NEURAL CELL ADHESION MOLECULE, 140 KDA ISOFORM PRECURSOR (N-CAM 140) (NCAM-140) (CD56 ANTIGEN).//0//723aa//96%//P13591 TESTI20080200//DPY-19 PROTEIN.//7.50E-114//621aa//38%//

10 P34413

TESTI20080330

TESTI20081390

TESTI20081440

TESTI20082340

15 TESTI20082400

1231120002400

TESTI20083430

TESTI20083870//CALCINEURIN B-LIKE PROTEIN (CBLP).//1.80E-73//169aa//82%//P28470

TESTI20084400

TESTI20086570//MELANOMA-ASSOCIATED ANTIGEN B4 (MAGE-B4 ANTIGEN).//4.20E-88//347aa//52%//015481

0 TESTI20087740

TESTI20088470

TESTI20136910

TESTI20138320//Xenopus laevis transketolase mRNA, complete cds.//1.30E-128//315aa//75%//AF270484

TESTI20140360//XAA-PRO DIPEPTIDASE (EC 3.4. 13.9) (X-PRO DIPEPTIDASE) (PROLINE DIPEPTIDASE) (PRO-

<sup>25</sup> LIDASE) (IMIDODIPEPTIDASE).//1.40E-55//111aa//98%//P12955

TESTI20177400

TESTI30000020//L.mexicana Imsap2 gene for secreted acid phosphatase 2 (SAP2).//2.00E-11//361aa//24%//Z46970 THYMU10000020//Homo sapiens mRNA for Golgi protein (GPP34 gene).//2.20E-135//274aa//95%//AJ296152 THYMU10000320

30 THYMU10000830//SUCCINATE DEHYDROGENASE [UBIQUINONE] FLAVOPROTEIN SUBUNIT, MITOCHONDRI-AL PRECURSOR (EC 1.3.5.1) (FP) (FLAVOPROTEIN SUBUNIT OF COMPLEX II).//7.30E-84//185aa//87%//P31040 THYMU10001050

THYMU10001760//SIALOADHESIN PRECURSOR (SER).//2.50E-42//127aa//71%//Q62230

THYMU10002910//Homo sapiens AP-4 adaptor complex beta4 subunit mRNA, complete cds. //1.30E-64//129aa//

35 97%//AF092094

THYMU10003290

THYMU10003590//BETA-CHIMAERIN//2.00E-23//200aa//31%//P52757

THYMU10003660

THYMU10003820

40 THYMU10004590//T-CELL-SPECIFIC TRANSCRIPTION FACTOR 1 (TCF-1) (T-CELL FACTOR 1) (TRANSCRIPTION FACTOR-7).//3.70E-89//172aa//97%//Q00417

THYMU10004730

THYMU10004910//Homo sapiens protein serine/threonine phosphatase 4 regulatory subunit 1 (PP4R1) mRNA, complete cds.//3.70E-49//144aa//65%//AF111106

45 THYMU10005270

THYMU10005580//Homo sapiens Sec22 homolog mRNA, complete cds.//7.00E-139//264aa//98%//AF100749

THYMU20001400

THYMU20002360

THYMU20003170//Homo sapiens topoisomerase II alpha-4 (TOP2A) mRNA, partial cds.//5.80E-09//92aa//42%//

50 AF285159

THYMU20003690//Mus musculus syntrophin-associated serine-threonine protein kinase mRNA, complete cds.// 3.20E-189//481aa//73%//AF077818

TRACH10000180

TRACH10000300//Anabaena PCC7120 hetC gene, complete cds://7.00E-12//200aa//29%//U55386

55 TRACH10000570

TRACH10000630//CDM PROTEIN (6C6-AG TUMOR-ASSOCIATED ANTIGEN) (DXS1357E).//5.00E-124//246aa// 100%//P51572

TRACH10000740//lg delta chain (WIE)//6.90E-251//513aa//90%//S17597

TRACH10001000//Oryctolagus cuniculus PiUS mRNA, complete cds.//6.50E-33//68aa//95%//U74297

TRACH10001060

TRACH10001250//lg delta chain (WIE)//1.60E-233//513aa//95%//S17597

TRACH10001400

5 TRACH20000150//DPP2C1//4.70E-05//152aa//30%//AAC28998

TRACH20000790//Xenopus laevis Churchill protein mRNA, complete cds.//4.10E-47//112aa//71%//AF238862

TRACH20001850

TRACH20001960

TRACH20002350

10 TRACH20002370//ZINC FINGER PROTEIN 184 (FRAGMENT).//5.40E-61//275aa//38%//Q99676

TRACH20002500//HYPOTHETICAL 65.2 KDA TRP-ASP REPEATS CONTAINING PROTEIN

D2030.9 IN CHROMOSOME I.//1.10E-82//375aa//42%//P90794

TRACH20002890//GROWTH FACTOR RECEPTOR-BOUND PROTEIN 7 (GRB7 ADAPTER PROTEIN) (EPIDERMAL GROWTH FACTOR RECEPTOR GRB-7).//3.90E-188//346aa//98%//Q03160

15 TRACH20003930//Rattus norvegicus matrin 3 mRNA, complete cds.//4.40E-192//371aa//96%//M63485 TRACH20004110

TRACH20004200//MAJOR SURFACE-LABELED TROPHOZOITE ANTIGEN PRECURSOR.//4.40E-06//96aa//33%//P21849

TRACH20004610

20 TRACH20004720//1-AMINOCYCLOPROPANE-1-CARBOXYLATE SYNTHASE 2 (EC 4.4.1.14) (ACC SYNTHASE 2) (S-ADENOSYL-L-METHIONINE METHYLTHIOADENOSINE-LYASE 2) (ACS-2).//5.40E-56//396aa//31%//P18485 TRACH20004960//Rattus norvegicus kidney-specific protein (KS) mRNA, complete cds.//2.90E-282//573aa//88%//AF062389

TRACH20004970//Transacylases//7.70E-11//151aa//32%//AAB94954

25 TRACH20006650//Rattus norvegicus mRNA for putative integral membrane transport protein (UST1r).//3.30E-187// 552aa//62%//Y09945

TRACH20006750//RADIAL SPOKE PROTEIN 3.//1.90E-50//156aa//48%//P12759

TRACH20007670

TRACH20007800//Homo sapiens PTH-responsive osteosarcoma B1 protein (B1) mRNA, complete cds.//8.40E-230//339aa//98%//AF095771

TRACH20008940//PROTEIN TSG24 (MEIOTIC CHECK POINT REGULATOR).//1.50E-202//384aa//97%//P53995 TRACH20008980

TRACH20009260//PROBABLE OXIDOREDUCTASE EPHD (EC 1.-.--).//5.80E-22//201aa//33%//Q10402 TRACH20009440//ZINC FINGER PROTEIN 91 (ZINC FINGER PROTEIN HTF10) (HPF7). //3.80E-07//89aa//39%//

35 Q05481

TRACH20011920

TRACH20012890//SEX-LETHAL PROTEIN HOMOLOG.//1.20E-07//115aa//33%//017310 TRACH20013950//Homo sapiens NY-REN-25 antigen mRNA, partial cds.//2.20E-50//104aa//56%//AF155103 TRACH20014000

O TRACH20015920

TRACH20016070

UMVEN10001220

UMVEN20001330//RABPHILIN-3A.//2.00E-18//272aa//30%//P47709

UTERU10000770//GAMETOGENESIS EXPRESSED PROTEIN GEG-154.//5.30E-33//73aa//97%//P50636

45 UTERU10000960//VA ATP SYNTHASE SUBUNIT H (EC 3.6.1.34) (V-ATPASE H SUBUNIT) (V- ATPASE M9.2 SUB-UNIT) (9.2 KDA MEMBRANE ACCESSORY

PROTEIN).//1.60E-15//68aa//51%//015342

UTERU10001600//ZINC FINGER PROTEIN 191.//3.20E-90//346aa//52%//014754 UTERU10001920

UTERU20000470//Homo sapiens neuropilin-2(a0) mRNA, complete cds.//5.00E-20//61aa//80%//AF022859

50 UTERU20003380

UTERU20003930

UTERU20004850//X-linked retinopathy protein//1.10E-16//97aa//51%//A46010

UTERU20005410

UTERU20005690

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#### **Claims**

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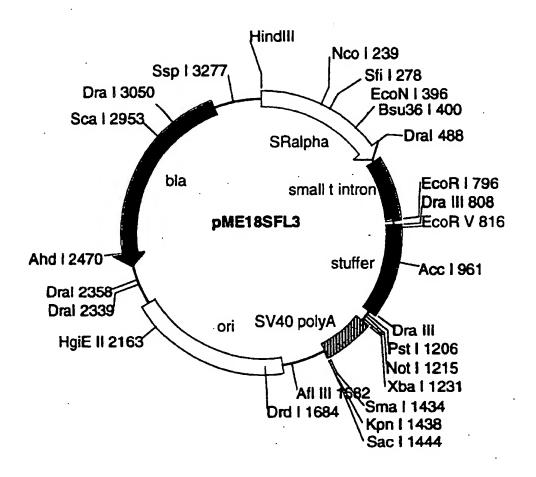
20

30

45

- 1. A polynucleotide selected from the group consisting of the following (a) to (g):
- (a). a polynucleotide comprising a protein-coding region of the nucleotide sequence of any one of SEQ ID NOs: 1 to 1639:
  - (b) a polynucleotide encoding a polypeptide comprising the amino acid sequence of any one of SEQ ID NOs: 1640 to 3278;
  - (c) a polynucleotide comprising a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of any one of SEQ ID NOs: 1640 to 3278, wherein, in said amino acid sequence, one or more amino acids have been substituted, deleted, inserted, and/or added, and wherein said nucleotide sequence encodes a polypeptide functionally equivalent to a polypeptide comprising the selected amino acid sequence;
  - (d) a polynucleotide hybridizing to a polynucleotide comprising the nucleotide sequence of any one of SEQ ID NOs: 1 to 1639, wherein said nucleotide sequence encodes a polypeptide functionally equivalent to a polypeptide encoded by the selected nucleotide sequence;
  - (e) a polynucleotide comprising a nucleotide sequence encoding a partial amino acid sequence of a polypeptide encoded by the polynucleotide according to any one of (a) to (d);
  - (f) a polynucleotide comprising a nucleotide sequence having at least 70% identity to the nucleotide sequence of any one of SEQ ID NOs: 1 to 1639; and
  - (g) a polynucleotide comprising a nucleotide sequence having at least 90% identity to the nucleotide sequence of any one of SEQ ID NOs: 1 to 1639.
  - 2. A polypeptide encoded by the polynucleotide of claim 1, or a partial peptide thereof.
- 25 3. An antibody binding to the polypeptide or the peptide of claim 2.
  - 4. A method for immunologically assaying the polypeptide or the peptide of claim 2, said method comprising the steps of contacting the polypeptide or the peptide of claim 2 with the antibody of claim 3, and observing the binding between the two.
  - 5. A vector comprising the polynucleotide of claim 1.
  - 6. A transformant carrying the polynucleotide of claim 1 or the vector of claim 5.
- 7. A transformant carrying the polynucleotide of claim 1 or the vector of claim 5 in an expressible manner.
  - 8. A method for producing the polypeptide or the peptide of claim 2, said method comprising the steps of culturing the transformant of claim 7 and recovering an expression product.
- An oligonucleotide comprising at least 15 nucleotides, said oligonucleotide comprising a nucleotide sequence complementary to the nucleotide sequence of any one of SEQ ID NOs: 1 to 1639 or to a complementary strand thereof.
  - 10. Use of the oligonucleotide of claim 9 as a primer for synthesizing the polynucleotide of claim 1.
  - 11. Use of the oligonucleotide of claim 9 as a probe for detecting the polynucleotide of claim 1.
  - 12. An antisense polynucleotide against the polynucleotide of claim 1 or a part thereof.
- 50 13. A method for detecting the polynucleotide of claim 1, said method comprising the following steps of:
  - a) incubating a target polynucleotide with the oligonucleotide of claim 9 under hybridizable conditions, and
  - b) detecting hybridization of the target polynucleotide with the oligonucleotide of claim 9.
- 14. A database of polynucleotides and/or polypeptides, said database comprising information on at least one of the nucleotide sequences of SEQ ID NOs: 1 to 1639 and/or on at least one of the amino acid sequences of SEQ ID NOs: 1640 to 3278.

Figure 1



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